Beyond the region:

the Learning Region.

A thesis submitted in fulfilment of the requirements for the degree of Doctor of Philosophy

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; and, any editorial work, paid or unpaid, carried out by a third party is acknowledged and ethics procedures and guidelines have been followed.

Anne Badenhorst
June 2009

Acknowledgements

Parts of this thesis are strongly connected to publications which are:

- *Victoria as a Learning Region, Background Report*, OECD Victoria Learning Cities & Regions Conference 2002 I was one of the authors lead by Jack Keating and written also with Tim Szlachetko;

- *Learning and Networks in Regional Development*, a paper I wrote and presented at the Governments and Communities in Partnership, From Theory to Practice Conference in Melbourne 2006;

- A chapter I contributed in *Building Stronger Communities Connecting Research, Policy and Practice* edited by David Adams, John Tibbett, Lesley Doyle and Peter Welsh, 2008; and

- the CRITICAL Research documents and reports.

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Abstract

In a global economy and a world of increasing polarisation and unsustainable development, learning is critical to change. With most of the world's population in cities and the region increasingly the focus of measures to improve prospects, the learning region concept integrates the conflicting, diverse and complex issues of development. This thesis examines learning in networks and further develops the theory of the learning region through a case study in Melbourne, Australia.

It begins with a case study of an industry network which was part of a research project – City Regions, Intelligent Territories, Innovation Competitiveness and Learning (CRITICAL). The CRITICAL research project examined learning processes in five cities and developed theory and tools to support learning regions. In this thesis the study of the industry network became the first step in a case study of the northern metropolitan regional economic development project. The study of the region demonstrated that there existed a strategic regional approach supporting local learning and action developed through projects based on local research and collaboration. The theories of 'communities of practice and 'architectures of learning' (Wenger 1998) provided the conceptual framework for the case study and proved to be a novel way to discern how learning was supported. A key finding in this thesis was how learning in networks was supported and that this led to organisational change, innovation and learning across different sectors and organisations. Data was analysed using a typology of the learning region developed in the CRITICAL project and the region was found to have characteristics of a learning region although without wider connectivity across the city could only be considered a sub region.

The study contributes to the body of work which demonstrates that the university can play a significant role in supporting the learning region and local engagement of key organisations, enterprises and government, and in the understanding of policy and programs to develop learning regions. The findings also contribute to innovation theory particularly with regard to networks and small to medium enterprises in manufacturing. Findings support the development of frameworks for urban regional development with the partnering of different levels of government to create new ways of operating and learning in the emerging mode of local governance partnerships and highlight the need to develop ways of measuring and understanding success or failure which capture the social, economic, cultural and environmental priorities of society.

Chapter 1

Introduction

Chapter Summary

This chapter provides an overview of the thesis. It contextualises the research within the activities of RMIT university, where my interest in university community engagement was developed, and also introduces the CRITICAL research project that was the genesis of the thesis. The chapter introduces the learning region concept and provides a brief overview of the Melbourne context. It then outlines the research design, methods and structure, how the research developed, and gives a summary of each chapter. Finally, it touches on findings and the research's relevance in this field.

Personal Involvement

This thesis grows from my work at RMIT University in Melbourne. I began as a research officer at RMIT in the very early phases of its development of a strategic approach to community university engagement and finished as the Director of Industry Partnerships after approximately ten years supporting community engagement and research partnerships. Over this time the university was also involved in international discussions of the role of the university in its community and regional development, and through this connected to the Organisation of Economic Cooperation and Development (OECD) learning region discussions and European Union (EU) research activity.

I have been involved in varying degrees over my career at RMIT in the region which is the focus of this study, in the OECD projects and a European research project, so I need to be clear about this as it impacts on the development of this thesis. Within a year of embarking on this study I was asked to represent RMIT on the board of the industry network which forms part of the case study. This assisted my understanding of the operations of the network and positioned me well within the community I was studying. It also meant I needed to design my research to ensure I undertook the study with academic rigour. My understanding of the region and the economic development project has changed considerably through this study and engaged me in an exercise which has taught me a great deal and enriched my work. It is my hope that this study will, in turn, make a contribution to the economic development project.

Through this work I also had a role in supporting RMIT's contribution to an OECD Learning Region conference held in Melbourne in 2002 as a co-author on the case study which featured in the conference, in the conference administration, and presenting a paper on university community partnership approaches. Following the conference, RMIT became involved in international projects, and this thesis began with a case study developed for a European research project. The conference and the ensuing activity have therefore been very important in my professional development and influenced the work I have done since in my roles at RMIT.

RMIT Approach

RMIT University over the time of this study had a strong commitment and a national leadership role in university community engagement. In the 1995 audit of universities by the Commonwealth *Committee for Quality Assurance in Higher Education,* it was grouped as one of nine universities considered to provide outstanding examples of community service with respect to management, process and outcomes, and was also included as one of five community service case studies in a report of good practice (1995).

In 1997, the *RMIT Committee for Community Service*, which was a committee of the RMIT Council defined community service at RMIT as

> engaging with the community. In many cases it involves partnerships or alliances with community groups. Co-operative establishment of projects and programs by RMIT and community groups ensures that the interest of the community is served. It also recognises that the outcomes achieved by combining resources with others in the community are greater than can be achieved by working apart (p. 2)

RMIT's leadership had developed a framework of university activity based on the Boyer scholarship model, which differentiates academic activities into four models of scholarship (Boyer, 1990). The four models of scholarship are described as

- creating new knowledge which is the discovery model
- knowledge put into a social and intellectual context described as integration
- applying knowledge in useful ways for industry and institutions described as application and teaching
- facilitating students learning and developing scholars in all areas.

In terms of its strategic plan this meant that the university would engage in social, cultural and economic development and, in doing so, support the generation of new ideas, their application to new contexts and their take up. With this approach greater outcomes could be

achieved by working in partnership (Mulroney & Badenhorst 1998). By 2002, RMIT University was developing an innovative and highly systematic approach to engagement with the community. In a paper on performance indicators prepared by a working party for the University executive, the following statement defining community and regional engagement was developed:

> Community and regional engagement is a subset of the broader themes of engagement and partnership which inform our approach to teaching and research, not a 'third leg' additional to the two major activities. There are significant overlaps with other modes of partnership work, however, RMIT's community and regional partnerships work is a significant subset of these themes, because it is the most explicit example of RMIT working from the outside in, in a partnership mode. (Burnheim 2002, p. 7)

In 2005, Adams, Badenhorst and Berman published for the Australian University Quality Agency conference an overview of the development of these indicators and engagement strategy. The paper demonstrated a sense of the history and the context for the work at RMIT and set out to explain the steps in the process developing the university strategy, performance indicators and implementation.

Northern Partnerships

RMIT supported in its formal structure a group which led and facilitated its approach to community engagement from 1994 until 2006. Initially it was established as Northern Partnerships. This was because the responsibility for 'technological education in the Northern Metropolitan Region' was enshrined in the Act which established RMIT University, implementing the amalgamation with Phillip Institute of Technology (PIT) which had had a strong community role. The amalgamation process was fraught, and it was a concern of the PIT leadership and community interests that the key role played in the region would be lost within RMIT given its central city location.

The Northern Partnerships group was established to alleviate these concerns and lead participation in many different ways across the region. It began with a project to develop an understanding of the region by undertaking a study of demographics, industry and community, mapping key organisations of the region, and identifying 'need and aspirations' and the RMIT capacity to 'match and respond' (Mulroney 1994, p. 2) The outcome of this study was the development of projects with partners so that the university was an active participant and involved in the issues and the solutions as they developed. Included in the Northern Partnerships group was a unit established by PIT, the Northern Interactive Education Collaborative Area Programme (NIECAP) which focused on schools, to link

industry and education, support technological and science education in primary and secondary schools, and develop pathways from secondary to tertiary education. The aim was to address critical issues of the region: the low retention levels at secondary school and participation in tertiary education; and the increasing skill shortages and need for high technology and innovation skills in the region's manufacturing industry. Added to the group over time was a unit which focused on pathways through community education, a program linking international students to communities and shared resources with the university research division to focus on industry.

In 1997, Northern Partnerships became Community & Regional Partnerships, as the approach grew to encompass a role in 'the City', defined loosely as the central business district of Melbourne, and in the Southern Grampians and East Gippsland in regional Victoria, and in Vietnam where RMIT was establishing a campus. Other less comprehensive approaches based on single projects were offered in a number of small rural communities where the group brokered university expertise into communities addressing issues which were generally due to disadvantage resulting from declining rural industries, withdrawal of services or relocation to metropolitan or regional centres and concerns about far lower participation rates in higher education than generally found in urban environments (Higher Education Council 1999). The growth in this group reflected a strategy which was based on the important role of the university in its community and the philosophy that organisations could achieve better results through working in partnership with others.

The Learning Region

RMIT is active at state, national and international levels in the area of university and community engagement, and this resulted in RMIT's involvement in 2002 with the State Government of Victoria and the OECD in the Victorian Learning Cities and Regions Conference. This conference presented Melbourne as the first case study outside of Europe in the development of the learning regions.

The case studies in Europe had been undertaken between June 1998 and April 2000, and took place in Jena (Germany), the Vienne Region (France), the Øresund Region (Denmark/Sweden), Andalusia (Spain) and Kent Thames-Side (United Kingdom) (OECD 2001a, p. 56). From these the OECD developed ten policy principles for creating and sustaining learning regions in a landmark study of learning regions (OECD 2001a). The conference and the Melbourne case study were developed from these principles.

The OECD Principles for the Learning Region:

Inputs to the learning process:

1. Ensure that high-quality and well-resourced educational provision is in place, in which effective individual learning throughout people's lives can be delivered.

2. Co-ordinate carefully the supply of skilled and knowledgeable individuals through education and training and the demand for them within the regional economy, so that the full benefits of individual learning may be reaped through its effects on organisational learning.

3. Establish appropriate framework conditions for the improvement of organisational learning, both with firms and between firms and other organisations in networks of interaction, and demonstrate to firms the benefits of these forms of learning.

4. Facilitate effective organisational learning not simply for a pre-selected set of conventionally defined 'high-tech' sectors, but across all of the industries and sectors within the regional economy that have the potential to develop high levels of innovative capacity.

5. Identify very carefully the extent to which the resources available to the region (existing industries, educational provision, research facilities, positive social capital and so forth) constitute an impediment to economic development ('lock-in') or may usefully contribute in developing innovative strategies for the future.

6. Respond positively to emergent economic and social conditions, especially where this involves the 'unlearning' of inappropriate practices and bodies of knowledge (including policy makers' own) left over from the regional institutions of previous eras.

Mechanisms of the Learning Region:

7. Pay close attention to mechanisms for co-ordination policies across what have generally been separate departmental responsibilities (for industrial development, research and development, science and technology, education and training and so forth) and between different levels of governance (regional, national and supra-national).

8. Develop strategies to foster appropriate forms of social capital as a key mechanism in promoting more effective organisational learning and innovation.

9. Evaluate continuously the relationship between participation in individual learning, innovation and wider labour market changes, especially with respect to social exclusion of groups within the regional population.

10. Ensure that regional strategies for learning and innovation are accorded legitimacy by the population of the region to be transformed. (OECD 2001a, p. 120)

This work continues through the work of the Programme on Institutional Management in Higher Education (IMHE) at the OECD. This program focuses on 'a wide range of cross-cutting issues, addressing key challenges faced by OECD member countries in the field of higher education' and activities include 'reviews of globalisation and higher education, higher education in regional development, an assessment of higher education learning outcomes as well as studies on quality of teaching in higher education and the impact of university rankings' (OECD 2006). The Learning Region project has been incorporated into a study on the role of HE institutions in regions with the outcomes of the 2004–2007 reviews of fourteen regions across twelve countries published in 2007 and a call for the participants in the second round made concurrently.

International Linkages and Context

Observatory PASCAL

The Victorian Learning Cities and Regions Conference engaged RMIT more fully in international networks. An outcome for the university was the establishment of the PASCAL Observatory, with RMIT and Stirling University, Scotland as founding university members. PASCAL, loosely an acronym for *Place Management, Social Capital and Learning*, began with an international dialogue out of the conference and has become a not-for-profit international observatory for promoting the exchange of cutting-edge best-practice research, ideas and policies about place management, including regeneration and new growth areas, social capital and learning cities and regions (PASCAL 2006). The PASCAL community link through web-based activity, annual conferences and publications. The website includes information on upcoming events, PASCAL associates, current projects and hot topics, as well as a library and newsletter archive. Its 'central concern is to support policy-makers who believe that the social should be at the heart of public policy, in balance with, and encompassing, the economic agenda' and in 'being an innovative partnership supporting community engagement' (Duke et al. 2005, p. 4). In 2008, PACAL initiated a project on universities and engagement involving up to 20 regions designed to share learning and develop solutions to barriers identified in the OECD study.

CRITICAL: City Regions Intelligent Territories; Inclusiveness, Competitiveness and Learning

Another important international engagement in relation to this study was the invitation to

RMIT to join the European research project, CRITICAL. CRITICAL was an international research project funded by the European Commission's 5th Framework Programme for Research and Development, which covered a three-year period beginning in February 2003.

The project initially focused on four city-regions: Dortmund (Germany), Dublin (Ireland), Newcastle (UK) and Tampere (Finland). Melbourne joined the project in August 2003. Eight approximately comparable networks or arenas were identified within each city, developed through the project priorities and negotiations within cities. These were the case studies which formed the basis of the work in the CRITICAL project.

The aim of the project was to understand the learning processes which take place within cities by examining a range of formal and informal networks within which learning and knowledge development took place. It sought to contribute to an understanding of the changing role of large cities in their national and regional territories and to the understanding of territorial learning processes, knowledge dissemination and transfer, and social networks in a number of different urban environments. Importantly, the project was designed to ensure relevance to, and involvement with, a number of city-based agencies. One of the outcomes of the project was a set of tools to help cities apply learning as part of a more holistic development strategy (Charles et al. 2003).

CRITICAL had five detailed objectives:

1. To test theories relating to knowledge societies and learning societies through empirical investigation of forms of knowledge and learning within selected cities

2. To identify the key roles played by cities in the wider knowledge societies of their regions/countries and identify the types of knowledge resources used by different networks within the city-regions

3. To investigate the institutions involved in collective learning processes within the case study cities, and specifically the roles played by tertiary education institutions and new forms of educational provider established to foster community learning and development

4. To assess the success of existing strategies to enhance learning and knowledge development within the cities, and identify potential good practices or lessons that could be disseminated more widely

5. To develop indicators relating to knowledge, learning processes and institutional engagement that will be helpful to local and regional authorities in developing appropriate intervention strategies (Charles et al. 2003).

When the decision was taken for Melbourne to be included as a city-region in the CRITICAL project there were questions about whether an Australian city could add to the findings, given very different regional approaches, political context and governance to the other, European, cities. It was Melbourne's involvement in the Learning Cities and Regions Conference which suggested there were linkages and synergies.

> Melbourne (was) included as a fifth city in the CRITICAL project, in order to provide a comparative perspective from a different political and economic environment, outside Europe. Four case studies of different kinds of networks (were) undertaken ... The four networks provide insights into different aspects of the dynamics which are shaping fundamental political, economic and social issues for Melbourne's evolution as a city-region. They also offer an opportunity to explore links between learning and knowledge generation, and economic and social outcomes (Wilson 2005).

This thesis began as one of these case studies focusing on an industry network and this led to the examination of a sub region of Melbourne. The CRITICAL project demonstrated that the study of networks and sub regions of the city provided rich material for further development of learning region theory, an outcome also supported by findings of this thesis.

Melbourne, Australia

There were particular issues for urban governance in Australia at the time of writing, which are discussed in Chapter Four in this thesis. These issues were driven at least partly by the Australian characteristic of very large metropolitan state capitals with much smaller regional centres and very small towns in the rural regions. There was considerable disparity between urban and rural areas, and governance issues complicated by the three tiers of government: local, state and federal, and sporadic attention to city or urban development (Spiller 2001).

Melbourne, the capital of the state of Victoria, had a population of 3.8 million, and approximately three-quarters of the state's population at the time of writing. The state had seventy-four Local Government Authorities (LGAs), and thirty-one of these were in Melbourne. Metropolitan LGAs extend over urban, fringe and rural constituencies and the CBD is included in one local government area. In 2002, a framework for planning in Melbourne was developed based on an audit conducted by the OECD. It resulted in the

Melbourne 2030 plan which aims to integrate city planning and is overseen by the Victorian government. This is discussed in Chapter 3 with State and Federal government policies which contextualise the case study.

The Northern Metropolitan Region

This thesis focused on a sub-region of Melbourne: the Northern Metropolitan Region, a wedge-shaped area of the city encompassing the inner city through the northern suburbs, extending to the urban fringe and a rural area. The demographic ranges from high socio-economic groups to the very disadvantaged. The area incorporates seven LGAs, with a population of 750,000. The region comprises approximately 19.5 per cent of the manufacturing sector of Victoria in which employment has been declining steadily over the past four decades.

The inner areas of the region has faced challenges in 'developing an environment for new employment options to flourish and managing future residential densities in line with policy directions' and the 'outer growth areas faced challenges with new home development, growing population and high susceptibility to change and economic stress as a result of higher unemployment, low skill levels and managing the rural interface with Melbourne' (Shepherd 2003, p. 14). A coherent approach to economic development, strong linkages across LGAs and co-ordinated advocacy for the region with the state and federal levels of government has been developing for more than twenty years.

The Thesis

Research Development

The thesis begins with a case study of an industry network of small to medium enterprises (SMEs), which developed in the Northern Metropolitan Region to support the manufacturing industry at a time of radical restructuring. The network was one of the initiatives developed from the emerging regional economic development project that brought diverse organisations and government together beginning in the late 1980s.

This case study of the industry network was undertaken within the CRITICAL research project and examined learning in the network. It did not lead to a closer examination of learning and innovation in enterprises and the role of the university, as initially predicted, but led outwards, following the finding that the industry network was a contributor to a concerted local effort to improve the prospects of the region. At this stage, the research question became more focused on how an industry network contributes to regional economic

development and why some key projects were seen as important to the industry. This line of enquiry developed through the use of the 'communities of practice' framework, which highlights the way individuals and groups across the region were linked and engaged in learning groups (Wenger 1998).

The argument developed in this thesis is that for learning to occur in a region it must be supported. The findings are that learning is supported by an infrastructure provided through the networks in the regional economic development project. The infrastructure described by Wenger as 'facilities of engagement, imagination and alignment' includes the physical resources as well as the administration, management and leadership in the regional economic development project. (1998, p. 238). This led to the examination of the region as a learning region, which concluded that although the region exhibited characteristics of a learning region and was particularly interesting in how the learning was supported, it was only a sub-region of the city and limited by this, given the lack of city strategy and engagement of state and federal government. The study of this region provides important findings for the stakeholders and further develops theorising about the learning region.

Research Design

As I have described, the research took a different direction to that on which was envisaged in the initial research design. The research began with a case study for the CRITICAL research project, then followed a different course, before returning to the project to test the tools and findings which had by then proved to be relevant. This is explained in more detail in Chapter 6.

The development of the research design was highly influenced by Norman Blaikie's work (1993, 2000), not only in the steps taken to plan and undertake the project but in understanding the epistemological position and assumptions which underpin the work. The attraction of Blaikie was his development of the 'abductive research strategy' from a subjectivist epistemological position, which supported an iterative theory development which made sense with the changes in research design. Blaikie's theory and relevance to the research is outlined in more detail in the next chapter.

Methods

Whilst a variety of methods and data sources have been used in the thesis project, including semi-structured interviews, a distinctive feature of the case study has been the use of a 'delphi method of enquiry'. This combined 'the judgments of knowledgeable individuals' and

tests consensus through 'controlled feedback and iteration' (Dalkley 2004). The method was chosen for two reasons. Firstly, to test the findings, elicit responses and determine what levels of consensus existed on the development and direction of the network, and secondly, given the researcher's personal and long-term involvement in the region and the industry network, to test theory development and validate findings against others' experiences.

A literature review was undertaken to develop understanding of theories relating to successful networks and learning regions. It included work on the knowledge economy and globalisation, innovation systems, and on social capital, learning, regional economic development, learning regions, the role of the university and theory development.

The communities of practice conceptual framework was introduced through the CRITICAL project. Specifically, the framework revealed a new way of understanding the activity in the region, and provided a way of conceptualising how learning and communities of practice were supported. It was a concept used to discuss learning with participants, was supported by interviews and examination of documentation and archives and was compatible with participant observation and the dual role of researcher and participant in the network.

Assumptions

There is a clear commitment to this work as Mode Two research.

> Mode Two research is carried out in a context of application and is transdisciplinary and characterised by heterogeneity… is more socially accountable and reflexive… and includes a wider, more temporary set of practitioners, collaborating on a problem defined in a specific and localised context. (Gibbons et al. 1994, p. 3).

This was important in the research which aims to support the regional economic development project through increased understanding and examination of the industry network in the face of potentially dramatic changes in organisations and government policy. The research engaged interviewees in reflection on their experiences of the network and asked stakeholders to consider the outcomes, understand where there was consensus and how they might reach consensus on the direction and approach of the regional economic development project. The engagement of the stakeholders in the development of the case study, the sharing of this information through the network and the Delphi exercise supported learning and planning whilst providing a case study from which to further build theory of the learning region.

Thesis Structure

The thesis is structured according to the development of the research and understanding of the region. Chapter 2 examines in detail the basis of the research and the methodology employed. It explains the CRITICAL research project and the research design developed in this thesis. It explains the epistemological position and addresses potential limitations in this study.

In Chapter 3, the study is situated in the international and policy context. This chapter provides the context for the investigations and analysis developed in the thesis. Key Australian and Victorian policy areas are explained. At the federal level this includes industry, science, research and innovation, higher education and regional development. This is matched at the state level with policy in areas of community strengthening, vocational education and training, industry, planning and regional development. Included in this chapter is also the relevant detail of the local environment where the research is situated.

Chapter 4 explores the industry network. The literature review of relevant fields in knowledge and learning, the knowledge economy, lifelong learning and innovation are discussed in this chapter, framing the case study of the industry network. In this chapter I find that there is learning in the network and that there are characteristics which are recognisable from the innovation literature and a model for projects and activity based on research, collaboration and partnership supporting learning across the networks. I explain how the communities of practice framework exposed the connectivity across the region in the economic development project and how this development led the research 'beyond the network'.

Chapter 5 undertakes a review of literature in social capital and cohesion, regional development and global cities. The chapter highlights examples of activities connected to the industry network and linked through key members and objectives. In this chapter the questions under consideration were 'Why is there learning across networks?' and 'What links the successful projects?'. The industry network participants identified two projects, the Whittlesea Youth Commitment and a campaign to move the Melbourne wholesale market to the region, as 'iconic', and these are examined in this chapter. Wenger's work also provides a framework of 'infrastructures of learning' which give shape to the ways learning and the development of communities of practice are supported across the region.

In this way Chapter 6 developed with a focus on the learning region and returns to the CRITICAL Research project. The literature of the learning region, lifelong learning and the role of the university in the learning region are discussed. A typology of the learning region

was developed in the CRITICAL project to bring better understanding and provide a practical tool to identify features and gaps in a region aspiring to a be a learning region. The typology is tested in this thesis and used to analyse the data gathered in this research on the Northern Metropolitan Region. The typology proved to be a useful resource and suggests the region exhibits many characteristics of a learning region and identifies areas where the region is not performing. The typology also reveals that the Northern Metropolitan Region is a sub-region of the city region, without a framework which connected the work at this level to a city region approach. This chapter concludes with an Epilogue which ties the findings of the study to events current at the time of the research and relevant to the region and the regional economic development approach studied in this thesis.

Chapter 7 draws together the findings, the contribution to the learning region theory and directions to pursue to continue this research. The findings are presented in a discussion of implications for the key stakeholders: industry, universities and government. The chapter concludes with a postscript which responds to the Epilogue in the previous chapter and supposes some optimism for both the regional economic development effort in the Northern Metropolitan Region and for policy in Australia.

Beyond the Case Study to the Theory

Definitions of regions, approaches to regional development, governance and sustainability are challenges in this study. The richness of local activity and approaches developed to address the extremely vexing questions of competitiveness, inclusiveness and learning are examined and the local work validated. This research found that in the Northern Metropolitan Region of Melbourne there is a strategic regional economic development project with an approach which is based on research, collaboration and partnership, supporting innovation in enterprises and in regional development projects. The networks provide an infrastructure of both the physical resources such as meeting spaces, administrative support and ability to formalise activities, as well as the support for new directions, ideas, projects and opportunities for regional economic development projects.

In theory from these findings the learning region supports innovation and learning by bringing people together with a 'joint enterprise' and capitalises on the knowledge and expertise found in the community and the 'generative dance between possessed and practiced knowledge' (Cook & Brown, 1999,381). Important is the input from social and community groups, government and industry sectors and the development of new leaders across the region. The 'infrastructures of learning' (Wenger 1998) assist the formation, maintenance and development of communities of practice, groups and projects. Learning inspires and engages

people in the activities. This engagement in turn, supports learning, the development of communities of practice and a sense of shared responsibility for the region.

Policy plays an important role in the learning region. The ability to learn through the implementation of programs and through feedback at different levels of government supports flexibility at local levels. The identification of sub-regions operating on a scale where people feel they can make a difference, and formalising network support for regional action is a solid building block in a learning region. An integrated regional development approach is generated by networked activity, governance is an important avenue of inquiry if policy and programmatic approaches are going to lead and direct action but also incorporate local knowledge and this networked activity.

The theory of the learning region is advanced through the work of this thesis. Findings in this thesis add to the developing body of work on the necessary linkages across levels of government, across sectors and in supporting learning. Findings include lessons for industry, government and universities. There are also contributions to the larger findings of CRITICAL and the use of the Learning Region Typology provides a practical addition to theory and practice. This is discussed in greater detail in the conclusion in Chapter 7.

Conclusion

It is an inescapable fact that this study's emergence and development has been influenced by my history and involvement in the network and the region, as well as by the larger research project that framed it. The CRITICAL project introduced a framework based on communities of practice which changed how I saw the industry network and also engaged me in the discussion and development of a better understanding of the learning region.

The thesis explores a very real regional development project and aims to develop an argument that will support and help set the direction for further research, as well as inform the priorities in supporting the development of a learning region

Chapter 2

Research Design and Methods

Chapter Summary

This chapter outlines the research design, describes the methods used and addresses potential limitations faced in this study. It contextualises the research, explains the CRITICAL research project methodology, my epistemological position and the choice of the Delphi method used in the thesis.

Introduction

This thesis has its genesis in the community engagement activity of RMIT University and my work in this area. The design and direction of the thesis has been driven by my commitment to the practical application of the research for the regional economic development project, the influence and leadership of the CRITICAL research project and the aim of contributing to this field of research.

Context

Engaged Research

The thesis is placed firmly in a Mode Two research paradigm. Mode Two research is introduced in the Gibbons *et al* 1994 study as *knowledge production.* This kind of research provides new ways of creating and using knowledge. It is knowledge in action, learned from and often simultaneously applied back where it is fashioned and tested (Duke & Badenhorst 2002).

Whereas Mode One research is 'pure, disciplinary, homogenous, expert led, supply driven, hierarchical, peer reviewed and almost exclusively university based, Mode Two research is 'applied, problem-centred, transdisciplinary, heterogeneous, hybrid, demand driven, entrepreneurial, and network embedded (Watson 2000). Mode Two research is 'more socially accountable and reflexive and includes a wider, more temporary set of practitioners, collaborating on a problem defined in a specific and localised context. In Mode Two knowledge production there must be an awareness of the methods and process used in the research, and the results of the study will be highly contextualised (Gibbons et al. 1994). This was an important element in the development of this thesis because the research centred on my work at the university. This work is contextualised by RMIT's adherence to the conceptual

framework of Boyer's Scholarship and to university community engagement, as well as my role in the strategic work of the university supporting and leading this approach.

There are competing voices in the discussion of the role and purpose of the university and its engagement with society. The most negative sees 'the university in ruins' and the 'end of knowledge in higher education' (Readings 1996, p. 12-13). This is based on the argument that university knowledge is no longer unique, that managerial control is at the expense of academic authority and independence, and that the need to be entrepreneurial for survival changes the status of knowledge—now sold in a marketplace with other products—as Marginson and Considine argued the university is potentially, on 'a journey from college to corporation' (2000, p. 67). Barnett, on the other hand, argues that the purpose for universities in the face of 'supercomplexity' is to 'develop frameworks and ways of education which support society to live, personally and collectively, with uncertainty, and support the world in living purposefully' (2004, p. 73).

Gibbons describes a 'new social contract' where universities can no longer engage as a 'discreet and separate institution where information travels in one direction from university science to society' (in Bjarnason, Coldstream 2003, p. 14). He suggests that this changes completely the nature of university engagement and that universities and others engage in 'transaction spaces' where there is 'dialogue at boundaries not translation across'. This shift does not deny the 'social contract' that has always existed for universities—that they serve the public good—but rather proposes how universities will continue this role by engaging with society in these spaces for 'effective co-operation in formulation and solution of complex problems'. Bell described this knowledge creation in the context of developing community–university partnerships as characterised by: mutual dependence, commonality of negotiated goals, sharing of different forms of expertise and communication based on trust and credibility (2004, p. 7). RMIT identified a role for the university in social, cultural and economic development supporting innovation in enterprises and social contexts. This is examined in the Chapter 6 through the data analysis where the role of the university in the learning region is also discussed.

Rationale

The role of the university is an important backdrop to the threefold aims of this study. Firstly, there is a practical and local aim to support success in the network and the regional development project, which are the central focus of the empirical work. The university played a part in this network and was a key organisation in the regional economic development project. This study was grounded in the network which is the focus of the thesis, and the

collection of data was a collaborative process. The joint aims are to support better understanding of learning processes for the participants and regional development organisations, as well as better approaches to supporting learning in the network. This was an iterative process and one which was supported by the interview process, conference publications, presentations in local forums, the Delphi exercise and contributions to planning and development in the regional economic development project.

Secondly, there is in this work an underlying examination of the policies which support or hinder the economic development project and the functioning of the industry network. Understanding the actions of the organisations, enterprises and networks in the regional economic development project is invariably framed by an understanding of the policies and politics which surround it. This provides insight into the policy and program process, which can, in turn, better inform new policy.

Finally, the study aims to contribute to theory and further progress the practical application of that theory. The study aims to understand learning processes in networks and contribute to the field of research in learning regions as part of the CRITICAL research project and by building on this project through this thesis.

City and Case Study Selection in the CRITICAL Project

The aim of the CRITICAL project was to understand the learning processes which take place within cities. The cities in the study were selected 'through an interactive approach with teams selected both for their relevant expertise and the fit of their host cities with the concept of the project … there is some comparability of scale and significance of the cities involved … as they range from a small national capital to regional centres, but explicitly exclude globally significant cities' (Charles et al. 2006, p. 28).

In each city the case studies were chosen in the following arenas (as they were called in the study): small to medium enterprises; clusters; cultural development; education and training amongst excluded groups; community based learning; sustainability; regional and urban development policy; and urban regeneration (http://www.ncl.ac.uk/critical/). They were chosen in conjunction with the city partners, through user groups, and in most cases involved public agencies as participants of these cases. 'Initially any formal policies that led to the formation of specific networks were identified and documented and the core membership of the groups mapped … (which provided) the starting point for the empirical investigation with interviews of group members, attendance of any relevant meetings and further interviewees

… identified from the contact patterns of group members on a snowball approach (Charles et al. 2006). The selection of arenas included the commitment of city-based agencies to ensure relevance of the project and to assist in the development of 'a set of tools to help cities apply learning as part of a more holistic development strategy' (Charles et al. 2006, p. 29).

Communities of Practice

The theoretical base of the CRITICAL project involved the linking of the debates about lifelong learning and learning economies. The focus was on 'learning as a socialised and collective process underpinning the success of cities' (Charles et al. 2006, p. 5). The core of the methodology was in conceptualising learning within the project using a framework based on Wenger's 'communities of practice' (Wenger 1998).

Wenger describes learning not as an individual process but as a 'social practice', and a 'community of practice as a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis' (Wenger et al. 2003, p. 4). This process must 'integrate the components necessary to characterise social participation as a process of learning and of knowing', including

- meaning: a way of talking about changing ability—individually, collectively—to experience our life and the world as meaningful
- practice: a way of talking about shared historical and social resources, frameworks and perspectives that can sustain mutual engagement
- community; a way of talking about social configurations in which our enterprises are defined as worth pursuing and our participation is recognisable as competence
- identity: a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities' (1998, p. 5).

This framework was used in the CRITICAL project because the position was taken that in policies developed for learning cities the emphasis had been placed on economic innovation systems and strategies for education and training rather than on the 'socialised production of knowledge in context and through action' (Charles et al. 2006). For this reason Wenger's work on communities of practice was used to inform the understanding of learning in the networks.

In this conceptual framework

> Learning is thus the socialised learning about specific practices and their evolution over time, often being reified through the formalisation and commodification of those practices. This fits well with ideas of learning in organisations within the innovation literature.

> A second element of the communities of practice idea is identity: individuals that are learning through communities of practice define an identity with those communities, often following a route from the periphery of the community through an apprenticeship to a more central position. Again this is interesting from a learning city perspective in the connection with ideas of social capital, often placed at the heart of learning city ideology (Charles et al. 2006, p. 22).

In the project a number of aspects of this theory were identified as relevant:

1. Focusing on the existence, or not, of a 'community of practice' alerts us to membership and participation and their meaning in a way that network analysis would not

2. The distinction between institution and 'community of practice' as it highlights shared activities not what occupation or role individuals have

3. It recognises a high threshold for learning which highlights also where learning is not occurring (Wickham 2004, CRITICAL project notes).

The CRITICAL project had some issues with Wenger's theories, especially a perceived lack of clarity on whether social learning is a particular form of learning or whether it is an inherent feature of all learning. Another issue was whether the 'community of practice' is better suited to informal learning in an apprenticeship model. In Wenger's theory the periphery of the 'community of practice' is a place where someone may be new and moves on a 'trajectory from periphery to core' as they become more adept at the practice, but it is also where someone might be invited into the community to provide a different perspective, for example 'architects bringing a client into the discussion' (Wenger 1998, p. 117). This raised the question of how a 'community of practice' learns or changes as it suggests the individual learns or changes but the 'community of practice' may simply be reproduced unless new participants do bring change to the community.

This led to a discussion about power and the different ways in which individuals are able to influence, force or control outcomes and how this will differ within a 'community of practice'. Questions around power focused on whether it is uniformly the case that the dominant source of power is at the core, with less power at the periphery, and what this meant for local

knowledge versus expert knowledge (Wickham 2004).

The management literature on communities of practice discusses similar issues, which can be categorised into three areas. First there is an interest in the move from the periphery to the core resulting in an idealised 'full' participation. Wenger's concept developed from the practice of apprenticeship, however, there is some debate about whether it can be more applied generally. Not all participants can achieve or aspire to 'core' participation, nor is it observable in all communities of practice (Handley et al. 2006, p. 644). The second area examines communities of practice in relation to organisational culture and knowledge management. The focus here is on whether communities of practice might assist in developing cultures which support trust and sharing of knowledge for organisational benefit (McDermott & O'Dell 2001). There is also study of the development of communities of practice for knowledge sharing and management through the use of online technologies (Ardichvili et al. 2003,). The third area relates to the characteristics of communities of practice and how they might be established to enhance learning and organisational change (Brown & Dugoid 2001, Fox 2001). Fox (2006) suggests communities of practice can provide space for creativity away from the constraints of organisations. Handley et al found communities of practice to be 'hetrogenous across several dimensions such as geographic spread, lifecycle and pace of evolution' (2006, p. 647). Roberts (2006) finds communities of practice do not support radical change in stable communities citing work by Grabher (2004) which found groups in computer software which gave priority to the accumulation of knowledge remain stable over time where as groups in advertising who valued creativity, changed membership regularly.

The communities of practice theory was developed with a focus on organisational learning. The discussion regarding communities of practice in management literature demonstrated similar concerns to the discussion in the CRITICAL project, however, a very different aspect of its use in the CRITICAL Project research was the use of the communities of practice framework in community projects, networks and regions.

Architectures of Learning

Although Wenger's theory does not suggest learning can be designed he suggests that organisations can conceive of 'architectures of learning' which he describes as 'the infrastructure supporting facilities for each mode of belonging to support the development of communities of practice' (1998, p. 230). The challenge according to Wenger is to support the work of 'engagement, imagination and alignment' (p. 237). This infrastructure encompasses both physical resources and administration of projects, and support for the development of

ideas, joint projects and learning. Wenger makes suggestions which are 'illustrative', and the following provides examples of the facilities of engagement:

Mutuality

- physical and virtual spaces, joint tasks and the availability of help, peripherality or boundary encounters, ways of belonging to different degrees, entry points to the community and for example, casual encounters

Competence

- initiative and knowledgeability: activities that bring about knowledge of engagement, occasions for applying skills … problems that engage energy, creativity and inventiveness
- accountability: exercising judgement, mutual evaluation, negotiation of joint enterprises
- tools: artefacts that support competence; discourses, terms and concepts…

Continuity

- Reificative memory: repositories of information, documentation
- Participative memory: generational encounters, apprenticeship systems, paradigmatic trajectories and storytelling.

The facilities of imagination include

- Orientation: Location in space, time, meaning which includes stories and examples, and power including organisational charts, process transparency
- Reflection: models and representations of patterns, time off, comparisons, breaks in rhythm
- Exploration: opportunities and tools for trying things out, envisioning possible futures.

The facilities of alignment include

Convergence

- Common focus, cause, or interest, direction etc and allegiance, leadership, sources of inspiration

Co-ordination

- Standards and methods: processes, plans, styles and discourses

- Communication: information transmission, spread of novelty
- Boundary facilities: brokers, objects, support for multi-membership. Jurisdiction
- Policies, contracts, due processes, mediation, conflict resolution, distribution of authority (pp. 237-238).

Wenger discusses the importance in designing for learning 'not only for schools and universities but all sorts of organisations in public and private sectors, as well as regions and nations' (p. 225). The CRITICAL project used the communities of practice framework in networks and across many organisations and enterprises. Whilst it was not unproblematic, it proved to be very useful in identifying learning, examining learning processes, identifying key participants and supporting conversations about learning in the research process. The use of the framework is further developed in this thesis where the identification of communities of practice and facilities for learning helped to understand learning in the regional economic development project. This is discussed in greater detail in Chapter 5.

Research Approach

Research involves ontological assumptions about the nature of reality and epistemological assumptions about how that reality can be known (Blaikie 1993). Ontology refers to the study of being, or 'what is', while epistemology refers to the claims or assumptions made about the ways in which 'it is possible to gain knowledge of this reality (whatever it is understood to be); claims about how what exists may be known' (p. 7). My assumptions 'have to do with the world that the methodology envisages, and different ways of viewing the world shape different ways of researching the world' (Crotty 1998, p. 66). Research is founded in the ontological and epistemological beliefs of the researcher.

Using an Abductive Research Strategy

In developing the research strategy I have relied heavily on the work of Blaikie. The appeal of his approach is his development of the abductive research strategy in developing understanding. Blaikie describes four strategies and three are concerned with explanations:

1. Inductive where an explanation is achieved by locating a particular pattern within a more general pattern or network of relationships
2. Deductive where an explanation is achieved by constructing a deductive argument to which the phenomenon to be explained is the conclusion
3. Retroductive which seeks to explain a pattern by the causal relationship (2000, p. 76).

Blaikie suggests that an abductive approach generates social scientific theory from everyday accounts. This approach uses the social world of the actors involved, and the researcher must 'enter their world in order to discover the motives and reasons that accompany social activities' and 'individual motives and actions have to be abstracted to typical actions in typical situations so these social typifications become the systematic explanations' (2000, p. 25).

My epistemological position is subjectivist, meaning I believe that we gain knowledge of the world through participation and our views are subjective. In other words, I do not believe that 'meaning, and therefore meaningful reality, exists apart from the operation of any consciousness' (Dixon 1997, p. 2). This underpins my approach to the research and the methods I have chosen. My epistemological position informs my theoretical perspective or philosophical stance (Crotty, p. 67). From a subjectivist position I believe my research is valid if I have understood the social activity from the perspective of the participants so in my research I have taken an interpretivist approach and 'look for culturally derived and historically situated interpretations of the social life-world' (p. 67). The abductive approach is interpretivist, meaning that it seeks to understand and explain human and social reality from the perspective of social actors. Blaikie summarises the interpretivist approach as

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Everyday concepts and meanings

provide the basis for

Social action/interaction

about which

Social actors can give accounts

from which

Social scientific descriptions can be made

from which   OR   and understood in terms of

social theories can be generated   *social theories or perspectives*

(1993, p. 177).

</div>

It is in the 'process of moving from lay description of social life to technical descriptions of that social life that the notion of abduction is applied … the abductive strategy involves construction of theory that is grounded in everyday activities' (Blaikie 2000, p. 117). Theory is built from the understanding of the participants.

Validity and Rigour

I selected the abductive strategy because it proved to be the most appropriate for the Mode

two approach which has informed this research project and it is compatible with my ontological position and epistemological approach. The study explores a social world with which I am familiar and in which I am a participant. As part of the social world and using the communities of practice framework to examine learning, I was well positioned to 'enter their world in order to discover motives and reasons that accompany social activity' and then 'abstract these into typical actions in typical situations' to 'provide an understanding and systematic explanation' (Blaikie 2000, p. 25). Of course being part of this world meant I needed to consider how I would ensure I developed a valid and unbiased view for my research and this I considered carefully in the choice of methods.

As I was well positioned to engage with the 'everyday interactions', the abductive strategy made sense of my longstanding involvement in the region, my knowledge of the activities, and the professional role which I had alongside my researcher's role. My methods reflect this and were chosen to ensure I was engaged with the participants in the research but not biased by my own experience.

Research Design

The research design is a 'blueprint' (Philliber et al. 1980) or a 'strategy or plan of action' (Crotty 1998). It is more than a workplan as it helps to avoid the 'situation in which evidence does not address the initial research questions' (Yin 2003).

Literature Review

The Mode Two research paradigm is multidisciplinary. The change in focus and development of my research also broadened the literature review and repositioned my thesis within the CRITICAL research project framework. The relevant literature is located in each chapter where it contextualises the empirical work.

Research Questions

As discussed under Rationale in this chapter, the aims in this thesis are threefold; to support the development of the northern regional economic development project, to understand the policy impacts and learning through programs and, through the development of the case study contribute to the theory of the learning region.

My original research questions were 'Is there learning and innovation in the industry network and if so how has this occurred?' My aim was to

- understand the learning processes and innovation within the industry network
- understand the role of the education institutions in the network

- determine whether there is a common or widely held view within the NORTH Link / NIETL network about its development and future.

Through the development of the thesis the research focus changed and my research questions became 'Why is there learning across networks and what links the successful projects?'. In answering these questions I began to see the study about the region as a learning region and asked the question 'Is this a learning region?'.

Concepts and Theories

A number of concepts are explored over the course of this study. The knowledge economy, innovation, innovation systems, lifelong learning, organisational learning and trust, are concepts deeply embedded in the discussion of the industry network. They have emerged as relevant in this work over years and are as prevalent in the language of the participants as they are in the field of research. Social capital and inclusion and regional development emerged as important concepts from the research framed, importantly, by the 'lay concepts and methods of understanding' expressed by the participants (Blaikie 2000, p. 139). The learning region in this study is a both a concept to be explored and a theory being developed.

Conceptual Framework

As discussed this research used the conceptual framework from Wenger's work on communities of practice to understand learning in the networks (1998). Wenger developed communities of practice through ethnographic study of learning within organisations, and although he articulates the possibility for this approach in *A Guide to Managing Knowledge; Cultivating Communities of Practice* across organisations or in networks to develop learning in society he does not pursue this direction (2002).

In this study the concept established in the CRITICAL project is used on the network as a way to understand learning in the regional economic development project, and is considered in conjunction with Wengers framework of architectures for learning: the infrastructure which supports the development of communities of practice.

Communities of practice provides both a concept to describe how people understand learning and their experiences and a method to construct and explore different types of experience within the networks.

The concept was accessible to interviewees and was used to describe different experiences in the network. It supported a more sophisticated and detailed discussion of learning and differentiated experiences of learning. Using communities of practice some interviewees

were able to explain their experience in a project group, or to point to a project group where they believed the outcomes and experience of participants demonstrated change and resulted in innovation. Using this concept also identified a group of people who supported a range of projects and were associated with leadership and developing 'great ideas and projects' (Interviewee). The use of this concept supported understanding of learning as a social process and also the exploration of different experiences of the network. It enabled discrimination amongst groups that learned together, groups that engaged in activity but did not form a community of practice, where there were no groups in operation, and individual's experience of the network.

Theory Development

In the endeavour to understand the learning region, the development of the theory is 'in response to a why question, it is the explanation of a pattern or regularity that has been observed, the cause or reason for it to be understood' (Blaikie 2000, p. 143). Blaikie describes the development of theory when using the abductive research strategy as 'iterative' with the 'data and theoretical ideas played off one another in a creative process.' (2000, p. 181). He suggests data is 'reinterpreted in the light of emerging theory and 'while this dialogue could continue forever saturation is achieved when satisfactory answers have been achieved to research questions' (2000, p. 181). Yin suggests theory informs the development of case studies and that cases are not 'representative' but rather findings should be generalised to theory. In this way theory developed through this case study informs theory of learning regions and does not attempt to suggest that the experience in the Northern Metropolitan Region could be replicated or considered representative.

Case Study

The case study approach was integral to the development of the CRITICAL research project. It is a way to build theory as 'particular phenomena can be studied in their own right or to provide information on a broad range of similar phenomena' (Evans & Gruba 2002, p. 92). There are, however, criticisms of a case study approach. The key criticisms are that dependence on a single case means generalising is impossible and, conversely, that if a number of case studies are used then it becomes difficult to establish their comparability. Blaikie argues that criticism of the case study approach is the result of prejudice against qualitative methods and that in fact the same could be argued about experiments. Yin (2003) defines the case study as a research strategy and argues that a 'different logic' is necessary, 'not the logic of statistical procedures used to analyse sample findings but a logic which builds from case studies to generalise and then build and test theory.' Both Blaikie and Yin propose that clear identification of the unit of analysis is especially important in the case

study and it is critical to define what the case study is.

The unit of analysis in the first phase of the research was the industry network and in the second it was the regional economic development project in the Northern Metropolitan Region of Melbourne. The regional economic development project as the unit of analysis then determined that the 'embedded units used as illustrative examples' were the industry network plus the Whittlesea Youth Commitment project and the campaign to attract the wholesale market (Yin 2003,26). Yin warns that in a case study too much attention may be given to the embedded units and miss the larger holistic aspects of the case. This concern is addressed in the analysis of the data where all data gathered was sorted and analysed using a typology which took the focus from the units to the whole project and activities across the region.

Yin also suggests that in the research design, theory development through the case study requires concern for issues such as 'the purpose of the descriptive effort, the full but realistic range of topics that might be considered a complete description of what is to be studied and the likely topic(s) that will be the essence of the description (2003, p. 30). These issues are addressed through the development of the research design by recognising the influences and diagnosis of in the international, national, state and local contexts, including policy, and through 'thick description' and use of examples.

Methods

Examination of Documentation and Archives

The first exercise in the gathering of data for the case studies was the examination of archives and current records, including newsletters, minutes of meetings, membership data, newspaper articles and organisational records.

Interviews

This was followed by a series of interviews to develop the case study of the Industry network NORTH Link/NIETL. The interviews were in depth and used open-ended questions. I undertook ten interviews in the first phase of interviews, generally lasting one and half to two hours. Questions were grouped under the following headings:

- Background/Context. These questions sought information about the foundation of the network and its development, turning points in its history and future prospects,

and the importance or otherwise of the different institutions and organisations in the network and their respective roles.

- Activities and practices in the network. These questions sought information about the network's objectives and purpose, activities and the division of labour, characteristics of communication within the network and externally, and characteristics of groups within the network.

- Learning about identity and belonging: what being part of the group/network means to the participant, how the participant would describe the culture. Is learning recognised, and how does it happen? What inhibits it and what supports it?

- Leadership and Governance. These questions sought information about network organisation, the leaders and leadership in the network, their influence and power, the focus of leadership and tools used, significant conflicts and how they have been dealt with.

- Success. These questions sought to evaluate the development of the network, its success or failure, and activities. They sought to identify the network's most important features/activities and advantages/disadvantages for the participant and for organizations. Could learning in the network be described as being for the individual, the organization and collectively? (CRITICAL work package).

It was important for me to work with members from the network to determine interviewees, as it was a collaborative process to produce research outcomes for the benefit of the network. It was also important to get views from outside the network to further my research aims. I selected the interviewees by starting with key participants identified through my participation and through the archives and newspaper articles, also taking recommendations from interviewees as I proceeded. Perceptions from outside the network and from those who might be more critical or less engaged were found by approaching appropriate government representatives who were not known within the network, as well as individuals mentioned in articles in local news who had given both positive and negative comments. I interviewed ten individuals between February and March 2005. Two were foundation members of the network, four were industry participants, one was a local government representative, one a state government representative and two were from the education sector.

I completed my data collection by the end of 2006 with an additional eight interviews. In these interviews I used the same question outline but included experience of activity beyond the industry network.

The Delphi Method

The Delphi method originated in the Rand Corporation after World War II as a tool for forecasting aspects of future warfare (Cornish 1977). It was designed to provide a way of bringing together expert opinion and group judgment without some of the issues in face-to-face communication such as 'personality conflicts, status relations or unwillingness to express certain beliefs publicly' (Hero 2001, p. 1). Although it was first used in the fields of science and technology it now has much wider application in social sciences and business and, most recently, in medicine and nursing (p. 1). The exercise begins with a piece of writing describing the situation to be considered or a questionnaire distributed to experts who amend the work, add their comments and feedback. The work of the experts is compiled and the piece redistributed for a second round of responses. In the second round the aim is to begin to develop consensus. It can be distributed again or in some exercises, particularly in the social sciences, at this stage the experts may be brought together in focus groups.

I used a slightly modified version of the Delphi exercise as the aim was not to establish the most reliable consensus on a difficult or urgent issue but rather to support the development, or to determine existence, of a common understanding so as to support the development of the network given it was facing a time of considerable change. The case study also initiated interest in the support for learning across the networks and the roles the different agencies and organisations played in this. I was seeking to understand what consensus there was about the network and to elicit discussion about the view formed through the interviews. This also relies to some degree on hermeneutic approaches, as I worked with text and with interpretation and analysis of written pieces.

I chose the subjects for the Delphi exercise based on my knowledge of the network and its members. I chose participants with a stake in the network; people who have influence over its development and a role in supporting that development. These were two members from local government, one from a manufacturing enterprise, one from the business services sector and one from the education sector, as well as the chair of the board and two key members from the agencies in the regional economic development project, the Industry network and the NACC.

I provided the case study plus a short narrative to the eight participants and asked them to respond in writing to my narrative. After incorporating their responses, I resent the study and asked again for their feedback. I asked for their comment on changes made by incorporating feedback and then discussing with the participants the way they viewed the differences and the significance of these differences, including where there was agreement. The exercise

supported the development of consensus about the direction of the network and the importance of the NORTH Link/NIETL partnership with the NACC, as well as the support for projects across the region.

I chose this method because of my position within the network and this region. Firstly I needed to ensure I was basing my views on the information I was gathering as well as using my experience and secondly that the findings had validity—both for the network members and also through testing with expert opinions on the network. From the interviews and documentation I developed the case study narrative of the Industry network and tested my findings using the Delhi method to ensure that the description and understanding I had reached was a shared understanding and not my own experience projected onto the participants. This incorporated feedback to support planning for the future of the network and to highlight some areas where there was great strength that was not obvious to the members of the network. This included the support provided across the region for learning, new leaders and projects as discussed in the findings of this thesis (Chapter 7).

Data Analysis

I analysed the data using the Learning Region Typology developed in the CRITICAL research project (Chapter 6). This ensured the analysis captured all examples and data acquired through the research and that I did not focus on particular units in the case study. Through the use of the typology all data was categorised according to characteristics and features of a learning region. This incorporated all the data collected and highlighted where the region exhibited characteristics of the learning region or failed to. This provided the basis for theory building based on my findings in the region, how they explained or illuminated the characteristics and how I developed the answers to my research questions. This was an iterative process which resulted in a theory of the learning region built from my findings, existing theory and could be further tested and developed.

Conclusion

The limited number of interviews and the capacity to generalise from these is a potential limitation to this study. I undertook semi-structured interviews with open-ended questions, which were time consuming both in duration and in scribing and analysis. Whilst I could have undertaken a greater number of interviews or searched more widely for views of individuals and organisations outside of the region I believe I reached a point of saturation, enriched by the use of the Delphi method, which did portray sound evidence of positive outcomes from the regional economic development project.

The breadth of literature and multi disciplinary nature of the study required a wide ranging search and review of literature which has been narrowed to focus on literature which informed and situated this study. There is a risk that this appears to lack depth and this is addressed by highlighting areas of particular relevance to the case study and bringing key themes together in Chapter 6 when discussing the learning region concept and theory.

Whilst I appreciate the argument about how difficult it is to make statements or draw conclusions about another case from the one studied I am also firmly of the belief that lessons might be learnt that can be useful in another context or setting. The importance of 'thick description' and differences over time, cultures, heterogenous and homogenous sites are critical considerations in how you might attempt to generalise. I also support the conclusions of Yin (2003, 36) that the findings can be generalised to theory and support further analysis of the learning region.

The following chapter begins that detailed 'thick description' by providing the international view of Australia and then, by drilling through the layers of policy from national to local, to provide a context for the case study and its extension across the Northern Metropolitan Region.

Chapter 3

Research Context

Chapter Summary

This chapter outlines the relevant government and policy context for the case study. It begins with a brief overview of Australia, its government, politics and international performance in areas of relevance to this study. It provides information on policy at the national, state and local level in areas including industry, science, research and innovation, higher education and regional development. The Victorian government policies examined are across similar areas and include community policy and vocational education. The chapter also provides information on Melbourne and the Northern Metropolitan Region in order to situate the study and develop a thick description for the case study.

Introduction

This study takes place over the period 2004 to 2007, with the bulk of the data collected by late 2006. The regional development project in the Northern Metropolitan Region has a twenty-year history and this chapter provides the historical and policy context to support understanding of its development. The policy and programs of all three levels of government in Australia have considerable impact on the project. National settings and the connectivity across levels of government in Australia are critical in supporting successful local actions. This policy context also links the theories and concepts drawn from the Victorian Government and OECD Learning Regions conference to place Australia in the global context, and the use of Melbourne and Victoria as a case study was influential in how this thesis developed.

Framing the policies at the different levels of government and across relevant areas demonstrates the influences and drivers of the actions in the case study. The economic development project has been developing for over twenty years and began when locals identified a potential crisis through change in government policy. The networks have kept abreast of policy directions and have been in some areas extremely well positioned in the national and state policy debates. The project has also attracted funding from a variety of government programmes. Policy has driven some very positive outcomes for the region. However, as this overview demonstrates it is disjointed and there is considerable difficulty in developing approaches which accommodate or support local regional development across the three levels of government.

Australia

The Nation

Australia reached a population of 20 million in 2003 with a growth rate of 1.2 per cent per year (ABS 2006). The nation is a federation of six states: New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia; and two territories, the Australian Capital Territory and the Northern Territory. The majority of the population live in Victoria, New South Wales and Queensland, along the eastern coastline, and while much of the country is desert or semi-arid, it has one of the most urbanised populations in the world, with three quarters of the population living in Australia's eight capital cities (ABS 2006).

Government

Government in Australia is based on a federal model, with elected state and territory legislatures and members of parliament. The Australian House of Representatives, or lower house, has 150 members elected in three-year cycles from single-seat constituencies using a system of preferential voting. The Senate, or upper house, has seventy-six members, with senators from territories elected for three-year terms and from states for six-year terms (Parliament of Australia, 2006). Three parties dominate Australian Politics: the Australian Labor Party, a social democratic party founded by the union movement, the Liberal Party of Australia, an economically liberal and socially conservative party, and the National Party, formed as the Country Party and traditionally representing rural voters, and generally the minor party in a traditional coalition with the Liberal Party. Minor parties are The Australian Democrats, the Australian Greens and the Family First Party.

The Commonwealth of Australia was formed in 1901, and is based upon a constitution that allocates a set of powers to the Commonwealth Government. Those powers that are not listed in this allocation remain with the states. The key powers that reside with the Commonwealth include defence and external affairs, tariffs and excise, and matters related to trade and commerce that extend beyond a single state. Decisions made by the High Court, which has the authority to resolve disputes arising under the Constitution, have allowed the Commonwealth to become involved in industrial relations and social welfare, and to dominate taxation revenue. This dominance in revenue collection has allowed it to provide grants to the states and territories, and through this come to participate in policy areas that constitutionally remain with the states, including education.

The Commonwealth now controls higher education policies and funds universities directly, even though universities are established through state acts of parliament, the state

governments have a minimal role in higher education. State governments do retain primary responsibility for school education, which is administered through state education departments, however, the Commonwealth has increased its role, especially as the main funder for non-government schools. It also funds a wide range of special initiatives. Commonwealth and state governments share responsibility and funding for vocational education and training (VET). In recent decades a range of ministerial councils have been established as a means of gaining more coherent approaches to policies, programs and regulations in a wide range of policy areas including education and training.

Local government forms the third level of government in Australia and typically has responsibility for local planning, aspects of infrastructure and community services (Keating et al. 2002, p. 16). These governments are established through acts of state parliament which, therefore, has the capacity to intervene in local government and override their decision-making.

Politics

Throughout the key period of this thesis a Liberal/National Party coalition held power. It came into power in 1996 after thirteen years of Labor government and remained in power until November 2007. Small parties held the balance of power in the Senate until July 2005 when the coalition Government also gained control of the upper house. During this time, all State governments were Labor.

The federal government pursued a neo-liberal agenda and explicitly stated its commitment to sound economic management and reducing the power of collective bargaining and unions. It was able to further drive controversial bills through parliament, including industrial relations reforms, which by supporting individual negotiations for contracts called Australian Workplace Agreements and discouraging group bargaining and industrial action radically altered the balance of power between employers and employees and unions.

Australia in the International Context

During the period examined in the thesis, Australia performed very well in terms of traditional economic measures. However, this performance was questionable in the context of a knowledge economy.

Garret-Jones makes the point that Australia is 'different' and argues that

> Australia is a rich medium sized industrialised nation but one that sits apart from
> the larger G8 countries in geography, historical development, economy and

technology. Its population and economic activities are dispersed across the continent, presenting regional diversity and barriers to interaction. [There are] unique features of Australia's innovation system as identified by Bob Gregory in the 1980's (Gregory in Nelson, ed. 1993). These were (i) low levels of science expenditure, (ii) high level of government funding in both funding and undertaking research and of funding universities (iii) a low level of business R&D and (iv) an exceptionally high dependence on foreign technology (2007, 3). He also notes that Australian business innovation differs (because) there are few Australian based multinational companies and many of the large companies operating in Australia are headquartered overseas ... also that many businesses remain directly or indirectly reliant on Australia's historical economic 'trump cards' of agriculture and natural resources production (2007, p. 5).

This argument is supported by the findings of the case study, discussed in Chapters 4 and 6, particularly in the findings about innovation in the small to medium enterprises in the Northern Metropolitan Region.

Economy

Economic growth in Australia has been inconsistent across regions, with pockets of disadvantage in cities and rural areas experiencing decline and hardship. Australia has amongst the most skewed distribution of income patterns. As shown in Table 3, the lowest and highest income groups have disproportionately low and high income levels, respectively, by international standards.

Table 1: Distribution of income across lowest and highest 20% income groups in selected OECD countries, 2000.

Country	Lowest 20%	Highest 20%	Country	Lowest 20%	Highest 20%
Australia	5.9	41.3	Italy	8.7	36.3
Belgium	9.5	34.5	Japan	10.6	35.7
Canada	7.5	39.3	Korea	7.5	39.3
Denmark	9.6	34.5	Netherlands	7.3	40.1
Finland	10	35.8	New Zealand	2.7	46.9
France	7.2	40.2	Norway	9.7	35.8
Germany	8.2	38.5	Spain	7.5	40.3
Ireland	6.7	42.9	UK	5.2	43
USA	5.2	46.4			

Source: World Competitiveness Yearbook, 2001

These patterns are confirmed in the United Nations Human Development Report (UN, 2001), which indicates that 14.9 per cent of Australia's population has an income 50 per cent below the median income, second highest to the USA with 16.9 per cent (Keating et al. 2002, p. 27).

These are significant considerations in the economic development project explored in this thesis. A strong motivation in the project stems from a sense that the Northern Metropolitan Region in Melbourne is struggling and does not have a 'fair share' of the resources of Melbourne. As will be discussed in more detail later in this chapter, it has areas with the lowest socioeconomic statistics in Melbourne and has been deeply affected by the restructuring of industry and the challenges faced in the manufacturing sector.

Education

The other catalyst for the focus of the regional economic development project stemmed from concerns about access to education and pathways to further education and employment, particularly for young people given that low levels of retention in schools and low take up of post compulsory schooling.

In their assessment of Australia as a knowledge nation, Considine et al (2002) raise serious concerns about trends in education performance and question the declining state of public investment. While the number of students in Australia completing year 12 in secondary school doubled between 1982 and 1992 to 77.1 per cent this has not been sustained, and by 1998 the rate had fallen to 71.6 per cent (ABS 2000). Further, the breakdown of these statistics show that in 1998, 66 per cent of male students completed year 12 compared to 78 per cent of females, while there was a 66 per cent retention rate in government schools compared to 84 per cent in the non-government sector (ABS 1998). In 2006, 14.4 per cent of teenagers and nearly a quarter of young people up to 24 years of age, were unemployed (or working part-time but wanting more hours) or not in education or training (Long, 2006).

Comparing the public funding of Australian universities with the OECD region as a whole since 1995, Australia was one of five OECD countries in which funding fell in real terms, dropping by 5 per cent (OECD 2006).

> There have been dramatic increases in international students into the system over this period on a full fee paying basis. Between 1990 and 1999 the annual number of graduates from higher education increased by 73.4 per cent, the total increase in domestic students was 51.7 per cent and in international students

460.3 per cent. Similarly in Vocational Education and Training in real terms between 1997 and 1999 public-source incomes fell by 2.2 per cent, income from fees and charges and fee-for-service activities fell by 2.6 per cent and teaching effort continued to increase out of this diminishing resource base whether measured by student numbers (11.9 per cent) or teaching hours (9.6 per cent). (Considine et al. 2001, p. 21).

Considine et al point out that in Australia tertiary participation remains above the OECD average as does tertiary expenditure, however, spending per student is below OECD averages and declining, while government spending on tertiary institutions has fallen by 7 per cent since 1995 (OECD, 2006).

Since the early 1990s there has been an increasing focus on policies to support young people at risk. The Finn Report, *Young Peoples Participation in Post-Compulsory Education and Training, Report of the Australian Education Council Review Committee* set targets for participation agreed to by Commonwealth and state governments. The key target by 2001 was that 95 per cent of nineteen year olds would have completed year 12 or an initial post-school qualification (Finn, 1991). However, these targets were not achieved. In 2001, the *Youth Pathways and Action Plan Taskforce* recommended a national commitment to youth, and a number of Commonwealth programs were introduced to meet this commitment including

- the National Youth Allowance introduced in 1999 which made the allowance available only to people under eighteen if they had completed year 12 or were in full time education of training. The aim was to 'send a clear message to young people and their families about the importance of continuing in secondary school or undertaking training that will increase young people's skills and employment prospects (Kemp 1998, p. 10)
- the introduction of the Full Service Schools Program to support links between schools and other agencies
- agreement through the *Adelaide Declaration on National Needs for Schooling in the Twenty First Century* (MCEETYA 1999) to support vocational learning opportunities and for example, support on a competitive tendering basis for work placement arrangements.

The success of these programs has been variable with considerable local differences. Outcomes are discussed in Chapter 5 in terms of the experience of the Northern Metropolitan Region.

Higher levels of participation in the workforce are associated with higher levels of education and higher numbers of science and technology graduates with research and technology, and there is a correlation between levels of literacy and economic equality (OECD 2000). However, this is not reflected in Australia's falling spend on tertiary education, lower levels of expenditure per student and Australia's failure to improve numbers of young people completing year 12 or an initial post-school qualification. This contributes to increasing polarisation and inequality in socio-economic backgrounds and funding which supports an increasing gap between private and public education. As will be discussed in detail in Chapter 5, considerable work has been undertaken at the local level to address shortcomings in this policy environment, although government interventions have not necessarily supported local work.

Research and Innovation

Investment in research and innovation in Australia has traditionally been dominated by government. However, between 1994 and 2003 there was a strong decline in the government spend on research and development at both state and commonwealth levels (2007, p. 8). During this period national expenditure on research and development was static at 1.6 per cent of GDP, which placed Australia in the low to middle rankings of OECD countries (DEST 2004).

Australia's performance against OECD knowledge economy indicators of investment is now poor relative to other OECD countries (2001, p. 2). This is supported in the World Competitiveness Yearbook (2007), which indicates in Australia a decline in 'skilled labour readily available', and in 'technical and scientific infrastructure' and 'direct investment flows' (IMD, 2007). Considine et al conclude that Australia's failure to invest in knowledge and knowledge-based industries is directly related to the 'country's problems in terms of external balance, foreign debt and the value of the Australian dollar' (2001, p. 45). They identify this as a reduction in capacity building, due primarily to declining public investment. The findings of this thesis discussed in Chapter 4 and 7 also suggest that attention to how investment in research and innovation connects to regional development, SMEs and universities is important.

Australian Policy

Industry and Regional Development

Until the 1980s Australia adopted a protectionist policy stance made possible by a strong performance in commodity and primary production and a local manufacturing sector. The

driver of a shift in national policy was the opening up the Australian economy to greater international competition. Early macro-economic reforms included floating the exchange rate and deregulation of the banking sector. Later, there were industry restructuring plans for the main industries facing difficulties with foreign competition which included passenger motor vehicles (PMV), textile clothing and footwear (TCF), heavy engineering, steel and shipbuilding industries (DITC, 1984).

Tariff reduction was a key aspect of the reforms, and this fundamental restructuring meant enterprises needed to be competitive in a global context. Training was identified as a critical element in improving performance to achieve this. Policy initiatives were introduced including

- the training guarantee levy—a tax incentive for companies to spend a percentage of turnover to train employees,

- a system of recognition of skills and competencies and of prior learning,

- the development of a national training framework and

- changes to the apprenticeship system (Carmichael 1992).

There were also targeted support programs for the industries most affected by the tariff changes. The Office of Labour Market Adjustment (OLMA) was established with the aim of addressing local issues and concerns in economic and employment initiatives, and to drive changes in targeting training for industry, retraining of workers and changes in employment assistance programs. The critical objective was the development of a system which connected education and training to industry needs and priorities. The work of Karpin (1995) was also influential in identifying the need to develop management and leadership in Australian enterprise to compete worldwide and export successfully. This was important in the wake of the introduction of a national competition policy, following the Hilmer Report (1993).

These policy changes were the catalyst for the economic development project that is the case study of this thesis. As a key manufacturing region in Victoria there were very direct impacts on the Northern Metropolitan Region. The training focus was embraced by the founders of the industry network and NIECAP (the schools industry group based at the university). The OLMA funding was also significant in the project as it supported the earlier initiatives that brought together the network.

Key Initiatives

Backing Australia's Ability

In policy terms, the initiative *Backing Australia's Ability* 2001 and 2005 was the most significant and relevant initiative in shaping the context of the study. According to DEST, *Backing Australia's Ability* represents a commitment to pursue excellence in research, science and technology, through three key themes:

1. The generation of new ideas (research and development)
2. The commercial application of ideas
3. Developing and retaining skills (DEST 2001)

The policy programs in 2001 were grouped under three areas of focus:

1. <u>Backing Research</u>: programs such as R&D tax concessions, funding in the national grants scheme for universities and a research training scheme, National Research Institutes in Biotechnology and ICT and supporting partnerships between universities and industry for commercialisation of research
2. <u>Backing Commercialisation</u>: Co-operative Research Centres, commercialisation programs in research, development and training, Intellectual Property systems and support, and seed funding
3. <u>Backing Skills</u>: additional university places, post graduate loans scheme, national innovation awareness strategy with specific programs in rural Australia and in schools (DEST 2001).

There has, over the course of this policy, been a focus on the vocational training system because of the intense interest in skill shortages and also major reforms to higher education. It needs to be noted, however, that this policy was not accompanied by increased expenditure. Policy changes have been achieved largely through a reallocation of and contest for resources, with the main losers being the business sector and the government research agencies and winners being the research councils and the universities (Considine et al. 2001). However, without changes to the programs which fund university research to meet the full cost of research, university resources are run down and this funding regime means the short term and commercial returns are prioritised over longer-term benefit and public interest research (Garret- Jones 2007, Scott-Kemmis 2004).

Industry Action Agendas

Industry Action Agendas have been another national framework focus. This was an initiative designed to be lead by industry leaders for sectors facing issues requiring a whole-of-government approach. Industry leaders could 'apply' for an action agenda or ministers could nominate an industry. A consultative committee would be established, supported by a secretariat from the government. In 2006, the Action Agendas completed or under development included Advanced Manufacturing, Cement, Facilities Management, Freight Transport Logistics, Automotive, Building and Construction, Heavy Engineering and Infrastructure, and Textiles, Clothing, Footwear and Leather (DITR 2006).

The types of outcome listed by the government were 'strategies within sectors to increase commercialisation and research and development'. These included increases in applications for R&D Start Grants, new Co-operative Research Centres in industry sectors with Action Agendas, the development of tools to assist industry develop export readiness and capacity, as well as the opportunity for companies to provide direct advice to government on regulatory reforms and environment strategies such as the development of minimum requirements for energy performance of buildings as part of the Building Code of Australia (DITR 2004, pp. 11-15).

Industry support mechanisms were established primarily through AusIndustry whose role it was to promote, support and process applications for their programs, such as the Biotechnology Innovation Fund; the Commercialising Emerging Technologies program to support early growth stage and spin-off companies; the Innovation Investment Fund, a venture capital program; and the Automotive Industry Competitiveness Scheme to encourage new investment and innovation in the automotive industry (AusIndustry 2005).

Marceau (2001) argues that the Action Agenda approach displays an awareness of the findings in the innovation literature and the national encouragement of research and development. It does this primarily through collaboration of firms, utilising the skills of the many diverse firms in the sector and beyond it, and in establishing a role for government which also supports the new organisational links between government, researchers and industry. The Action Agendas also supported national systems of innovation and an understanding that policies must be developed across a range of areas and include regulatory frameworks and mutually supporting policies (p. 4).

These programs are identified in the activities in the region in Chapter 6. There was, as would be expected variable take up by enterprises and considerable challenges in engaging small to medium enterprises and particularly in the medium to low technology sector. There

was considerable promotion and engagement through the industry network and effort in supporting these companies as discussed in Chapter 4.

Higher Education

A review of higher education by the Commonwealth Government in 2002 produced the ministerial paper *Higher Education at the Crossroads*. The reforms proposed in the paper closely related to the Backing Australia's Ability policy. Government priorities for higher education outlined in the policy package *Our Universities: Backing Australia's Future* identified reforms structured around four key policy principles:

1. Sustainability: improved governance, appropriate resourcing and greater pricing flexibility for universities
2. Quality: incentives to improve performance and greater accountability
3. Equity: increased number of student places, greater availability of income-contingent loans, increase in the repayment threshold and incentives to improve participation and outcomes for disadvantaged groups
4. Diversity: incentive and performance-based funding for teaching and research, support for restructuring and collaboration and additional funding for regional institutions (DEST 2005, vi).

University Community Engagement

The Ministerial paper also discusses engagement of universities with their communities, with engagement described as 'beyond employing people and purchasing goods and services'. It was also 'mutual recognition of community service obligations contributing to the economic and social viability of both the institution and the community' (Nelson 2002, p. 110). The Association of Commonwealth Universities defines university community engagement as

> the strenuous, thoughtful, argumentative interaction with the non-university world in at last four spheres: setting universities' aims, purposes and priorities: relating teaching and learning to the wider world; the back and forth dialogue between researchers and practitioners; and taking on wider responsibilities as neighbours and citizens (ACU, 2001, p. 1)

Garlick's research on the Australian higher education system identifies a need for government to recognise in mainstream policies the role of universities as knowledge enhancing, if universities are to realise their potential in society (2003). He has found also that universities generally consider engagement a liability under government funding policies.

Garlick (1998, 1999, 2000, 2003) has undertaken considerable work to build a picture of community university engagement in Australia. His work over time tracks varying levels of

commitment to engagement amongst universities and highlights numerous case studies of excellent practice. He proposes rigorous work in performance measures and benchmarking to ensure the benefits of community engagement are understood, recognised and rewarded. This would also support the development of funding models.

At the time of this study there is work underway, auspiced by the Association of Universities for Community Engagement Australia (AUCEA), to develop benchmarks in university community engagement. Research undertaken through EIDOS suggests that typically university management in Australia are not aware of the breadth of engagement of their institutions and that reporting and understanding is stronger at school level, but there is no consistent format or approach to reporting (Winter et al. 2006). [1]

Third Stream Funding

In 2003, the government called for responses from the higher education sector to a proposed 'third stream' of funding based on a UK model. In the UK 'third stream funding refers to 'university activity that is, enhancing the contribution of HE to the economy and society' in which (third stream funding) is allocated on a competitive basis for community engagement, with a separate stream which funds programs to develop and support volunteering in universities (HECFE 2007). There was, predictably, a range of responses for priorities in a third stream fund. Different universities were interested in different priorities.

Commercialisation was a priority for some of the sector where as others were in favour of a community engagement priority. At the Federation of Australian Scientific and Technological Societies (FAST) conference it was very clear that there was no unanimous position in the sector, and a push for 'knowledge transfer rather than a UK third stream approach' from FAST was not influencing government thinking and policy development (2006). The Collaboration and Structural Reform Fund was introduced and identified as 'new money', with $33.6 million dollars allocated over three years to provide opportunities in this area. The initiative was to fund collaboration between universities and communities. However, after the initial, and limited round of funding, it seemed to favour restructuring initiatives over collaboration.

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[1] AUCEA Australian Universities Community Engagement Alliance. An alliance committed to university-community engagement in order to promote the social, environmental and economic and cultural development of communities www.aucea.net.au
eidos – an independent research institute think tank. Its objective is to generate new ideas and dialogue on good education, labour market and social policy www.eidos.org.au

Regional Economic Development

Australia has poorly defined regions in terms of government areas of responsibility. Health, education, catchment and natural resources management, economic development, and employment services for example are divided into different regional areas across the three levels of government.

In the 1980s, there was a trend towards national policy in education and training, health, industrial relations and transport. However, there was increasing concern about regional and rural in particular, disadvantage. Key documents informing regional development policy in the 1990s were the Industry Commission draft report on *Impediments to Regional Adjustment* (1993), the *Kelty Report* (1993) and the *McKinsey Report* (1994). The focus of all reports and, subsequently, government policy, is on promoting economic development through industry and enterprise development and attraction. The underlying premise was that the regions needed to 'do their own development' and local issues should be addressed at the local level.

The Regional Development Organisation (REDO) program was set up by the Labour government in the mid-1990s to support infrastructure development. It was anticipated that the REDO would be the vehicle through which funds for large-scale infrastructure and regional development initiatives would be funded and connected to local priorities. However, the Coalition government discontinued funding to the program when it came to power in 1996. Although regional development policy was much the same under the new government, a notable change was a strong emphasis on rural areas. Policy initiatives included tax relief for farmers and small business in capital gains and greater flexibility in wages and work practices. Another significant 'regionally' based organisation was the Area Consultative Committees (ACC), which focussed on employment development. They were established under Labour in 1993, and although not all committees continued, those able to continue with local commitment were supported by the new government. There was then a refocus of the program, and fifty-six committees were established across Australia. ACCs are non-profit, community-based organisations, and members of boards are volunteers with a chair selected by the minister. Each ACC receives annual operating funds to employ an executive officer and an administrative support person to undertake the work of the ACC.

Over the period of the study, the Department of Transport and Regional Services had responsibility for regional development. Its objective was 'to provide the economic environmental and social infrastructure necessary for Australia's regions to realise their potential' (2006 DOTARS). It was focused very strongly and deliberately on rural Australia to

address growing inequality between rural and urban Australia. The key mechanism for the regional development approach has been the Regional Partnerships program, a funding program overseen by the ACCs, with approvals given by the minister. This has been a fund for projects developed at the local area. The Department undertakes the assessment of the project, which is intended to test the fit with local strategies and needs, as well as the departmental objectives and guidelines. The applications require contributions from local organisations and support the development of projects in the area and as they have no set deadline and can be submitted throughout the year.

The Northern Area Consultative Committee is a key player in the case study of the Northern Metropolitan Region. It is one of only eight ACCs which survived the changes in government and is typical of the ACCs in covering a number of Local Government Areas. It survived with a strong support base and is instrumental in the design and development of the regional economic development project in the Northern Metropolitan Region of Melbourne.

The other area of relevance to regional development and the role of local government is the Local Government and Planning Ministers Council which was established in 2003. It is made up of Local Government and Planning Ministers from Australia and New Zealand together with the President of the Local Government Association. In their strategic priorities were sustainable towns and cities plus infrastructure supply and demand although these do not seem to have great currency more widely in government. This Council also agreed to and signed the *Intergovernmental Relations Agreement on Local Government Matters* which aimed to provide greater transparency between the three spheres of government in relation to local government functions and it established the *Development Assessment Forum* to 'harmonise and improve planning and development assessment systems' (LGPMC, 2006).

Sustainability

The Coalition government did not give high priority to environmental issues. This was most evident in its failure to sign the Kyoto agreement, as well as a general lack of policy initiatives. There was little in the way of incentives for local government or industry and this was evident in the case study with only one strong example of activity in this field. The example was funded through a program in the Australian Greenhouse Office called the Greenhouse Challenge program which supports companies and organisations to reduce greenhouse emissions. (Greenhouse Office 2006). This program has supported a significant initiative in the northern region, highlighted in Chapter 4. The innovation in the program has come from a partnership between the industry network and the university. The model developed will be taken up by the Greenhouse Office and replicated nationally.

The Greenhouse Office was located within the Department of Environment and Water Resources (formerly Environment and Heritage), which also supported the Environment Protection and Heritage Council. This Department ran the Sustainable Cities Program, which was announced in the 2003 budget with forty million dollars over five years. Key initiatives included a water efficiency labelling standards scheme for appliances and household fittings; national standards and regulations for air and fuel quality; ozone protection; waste and chemical management; an extension of the photovoltaic rebate program run by the Greenhouse Office; the Cycle connect program, providing bicycle facilities at bus and train stations for cyclists also using public transport; and support for a program which encouraged local governments to improve water conservation (DEWR 2006).

Victorian State Government Policy

Geographically, Victoria is amongst the smallest states of Australia but has the second largest population after New South Wales. Consistent with other states in Australia, the capital city area of Melbourne has grown substantially in population and income, while some rural areas continue to suffer population and income declines (Keating et al. 2002). Although most macro economic management lies with the Commonwealth government, state governments are held accountable electorally for their regions and have a key role in supplying infrastructure and environment for industry investment.

Growing Victoria Together

The central policy framework of relevance in the State government over the period of this study was the Growing Victoria Together (GVT) policy, with a stated aim that:

- By 2010 Victoria will be a State where:

- Innovation leads to thriving industries generating high quality jobs.

- Protecting the environment for future generations is built into everything we do.

- We have caring, safe communities in which opportunities are fairly shared.

- All Victorians have access to the highest quality health and education services all through their lives. (Department of Premier and Cabinet 2001)

Through GVT the Government sought to link issues important to Victorians with priority actions and measures to demonstrate progress. The GVT framework took a triple-bottom-line approach to public policy by attempting to balance economic, social and environmental

goals in growing the entire State (Department of Treasury and Finance 2002). The Government used GVT as an organising framework for policy development and implementation and resource allocation with eleven GVT issues used to guide the 2002-03 State Budget. These eleven initiatives were

1. Valuing and investing in life long education

2. High quality, accessible health and community services

3. Sound financial management

4. Safe streets, homes and workplaces

5. Growing and linking all of Victoria

6. Promoting sustainable development

7. More jobs and thriving, innovative industries across Victoria

8. Building cohesive communities and reducing inequalities

9. Protecting the environment for future generations

10. Promoting rights and respecting diversity

11. Government that listens and leads.

Government departmental objectives, corporate and business plans and output and performance reporting systems were also being aligned with the GVT framework. The government also made a commitment to work with communities on the GVT important issues and to improve the progress measures through forums, such as Community Cabinets which enabled citizens in metropolitan and regional locations to speak directly with members of the Government about their issues and concerns (Adams & Wiseman 2002).

GVT was an attempt to provide a comprehensive 'whole-of-government' strategic vision and plan. Its impact beyond initial policy refocussing is difficult to judge at this stage, and will only become apparent over a longer period of time. However, the GVT framework and progress measures have provided a focus for Government and its Departments on outcomes and on whole-of-government approaches to policy issues (Adams & Wiseman, 2002).

The GVT grew from its beginning in the Office of Community Building in the Department of Premier and Cabinet (DPC) and, after the re-election of the Bracks Labor government in December 2003, became the responsibility of the Department for Victorian Communities. Outcomes over the period of this thesis include indicators developed by the Department which map community strengths across Victoria, and with this an attempt to achieve a consistency of boundaries across government. There has also been an increased emphasis

on the role of Local Government. In 2005, *A Fairer Victoria* was launched to support the GVT initiatives and to focus on strengthening local communities.

Community Strengthening

Neighbourhood Renewal

The Neighbourhood Renewal project is an example of the community strengthening initiatives of the State government and its cross-departmental approaches. This is a 'long term commitment by State Government to narrow the gap between disadvantaged communities and the rest of the state' (DHS 2006). The program identifies a site where there are indicators of compounded disadvantage, brings together community and government and sets up a community management structure to develop community ownership and planning for programs to support change in the neighbourhood. This program involves departments across government working together in one location to deliver services and programs to address issues in areas such as physical infrastructure, housing, social, cultural and economic spheres.

The first evaluation was positive, with good results for communities including employment and education outcomes, improved housing and infrastructure, particularly public parks and spaces with improved public pride and participation. Outcomes from the evaluation include commitment of funds for four new sites, as well as the extension of projects to eight years and a greater focus on employment and enterprise development (DHS, 2006). In his discussion of the evaluation Raysmith (2004) highlighted the need for leadership from the senior levels of government, communication and feedback, locking in commitment to collaboration (and doing it over and over) and building relationships as clear requirements. Raysmith made the important observation that

> when a place is defined and given some status it gives permission for people to
> engage with residents and with each other. It creates a dynamic and opens the
> way for new and collaborative ways of working (p. 11).

Learning Communities

Lifelong learning was an important goal in GVT, and the Adult Community Further Education policy identified Adult and Community providers, including neighbourhood houses, as 'playing a pivotal role' (DET 2005). Within the auspice of the Adult and Community and Further Education Board was the Learning Towns initiative that supports learning towns and communities. This started from a program in April 2000 when ten towns won funds worth $110,000 for establishment of their Learning Town. In this program 'collaborative learning

partnerships are developed by linking community based adult education organisations, TAFE/educational institutions, industry, local government and community activity' (ACFE 2006). Objectives of the program include 'developing community wide coalitions to support life long learning, reinforcing the role of local council involvement in community based education and training innovation and improving coordination and integration of educational, social and economic planning in rural and regional areas (ACFE 2006). Neighbourhood Houses were also funded through ACFE initiatives, to provide educational, recreational, community and social programs and courses at low cost, with the aim being to '… enhance the social and economic development of communities and [to be] run on principles of inclusive participation, community empowerment, life long learning and active citizenship' (DVC 2005).

Community Building

Two major state government initiatives have aimed at community building. The first is the Community Capacity Building Initiative which ran eleven projects between 2001 and 2004 involving more than 3000 volunteers and creating over 2000 infrastructure projects and over 80 community strengthening events including local festivals and multicultural events. The second, announced in 2005, promised $10 million to support local residents working with 'government and community agencies to plan for and address local needs, build local leadership and foster community networks' (DVC 2006). These programs vary according to local priorities and in the Northern Region case study the City if Darebin has had successful outcomes developing leadership in young people, in community police relations and local festivals, as described in Chapter 6.

Regional Development and Planning

The Department for Innovation, Industry and Regional Development is responsible for

- Investment attraction
- Trade development
- Developing innovative industries
- Regional development
- Marketing Victoria.

as well as three 'support objectives':

1. Competitive and fair business environment
2. Productive workforce
3. Innovation and industry policy (DIIRD 2006).

The Department's approach was in line with the Growing Victoria Together strategy in that it did not, as its Federal equivalent would, consider regional development as largely defined as a rural area construct. There has been a sense that the work is about 'Victoria' and is clearly aligned with the overarching government position.

Industry Support

Important examples of targeted programs aimed at supporting industry included the Victorian Industry Participation Policy, which targeted SMEs and aimed to boost employment and business growth by expanding market opportunities for SMEs and developing skills and access to major projects. Aligned with this policy was the Industry Capability Network which provided services free of charge for local sourcing for major projects, import replacement enquiries, overseas project facilitation and research (DIIRD 2006).

Manufacturing

Although accounting for less than 20 per cent of employment directly, Victorian manufacturing has contributed more than 50 per cent of investment made by Victorian business in research and development (MICC 2002, p. 6). Manufacturing provides 15 per cent of Victorian jobs and 19 per cent of fulltime jobs. It generates 60 per cent of Victorian exports, 16 per cent of Victorian economic activity and accounts for 53 per cent of business spending on research (NIER 2003). The Victorian Government also claims that manufacturing generated $30 billion in value-added activity between 2001 and 2002, and that global supply chains are anchored in Victoria (DIIRD 2006, p. 4).

Milestones in government manufacturing policy over this period were the

- appointment of a Minister for Manufacturing in 2000 and establishment of the Office of Manufacturing
- establishment of Manufacturing Industry Consultative Committee (MICC)
- launching of the Victorian Manufacturing Hall of Fame and an annual awards night event in 2001
- Agenda for Manufacturing launched in 2002.

The Office of Manufacturing and Service Industries 'partnered with Invest Victoria to facilitate investment into Victoria's manufacturing and service industries, supporting export programs,

delivering industry development programs and monitoring key sectors to provide advice for policy development' (DIIRD 2006).

The key manufacturing initiatives included

- *Innovation Insights* which supported on site industry visits to learn from world class operations
- *Technology Demonstration* which showcased successful implementation of new technology
- *Technology Evaluation* which provided grants for enterprises and research and development collaborations to accelerate the identification, development and application of new technologies
- further policy research to identify skills and technology needs
- the establishment of two *High Performance Manufacturing Consortia*
- an annual conference and regular international expert speakers, Value Chain and Business Innovation workshops (DIIRD 2006).

There were also programs to support exports, which included trade missions, an online information service, a number of workshops and incentives for companies to collaborate, skills development which provided for 200 industry-based tertiary scholarships or bursaries, and Industry Liaison Agents who broker training to SMEs (DIIRD 2003).

These policies and programs intersect with the industry network and the regional economic development project. The network has promoted and supported the programs to members and has taken a brokering role to introduce government programs to members of the network. This is also an area of government support where the network regularly seeks funding through tenders and proposals to the appropriate program or department. The specific outcomes at the local level are described in Chapter 4 and summarised in Chapter 6 through the typology.

Melbourne 2030

The framework for planning for Melbourne was developed in 2002 based on an audit undertaken by the OECD. The plan aims to address Melbourne's rapid growth and sprawl. Key elements include activity centres to develop economic, social and cultural nodes across the city linked by transport to support local areas; changes to development codes to encourage greater density development; an overall plan for residential and other purposes to address changing needs of the city; and the setting of boundaries around the city (DOI 2006).

The implementation of Melbourne 2030 has been plagued by accusations of a lack of support at local levels for consultative, educative processes and implementation, local protests to developments increasing density, conflict over locations of activity centres, and questions regarding the efficacy of the activity centre strategy and boundaries (Birrell, O Connor et al. 2003, Kirby 2004, Buxton 2005, Tieman, 2005). A government review based on Census 2006 data claims that the 'fundamental assumptions remain sound and the strategic framework it provides remains adaptable to changing circumstances, such as the higher than projected population growth Melbourne is experiencing … implementation has become more urgent.' (2007).

Gleeson et al (2004) suggest criticism is from a 'political-ideological framework' not necessarily from analysis and evaluation of metropolitan strategies. They argue that the Melbourne 2030 strategy does encompass changes in planning theory and practice in the face of governance and sustainability challenges and demonstrates a move to more integrated planning within Australia's principal urban regions' (2004). They also claim that the Melbourne 2030 policy ambit is strikingly ambitious; land use is integrated with transport, policies of urban design, economic globalisation, sustainability, as well as equity (Gleeson et al. 2004, p. 354).

Local Government

There are seventy-six Local Government Areas (LGAs) in Victoria. In Melbourne there are twenty-six metropolitan and five outer-metro LGAs. The Northern Metropolitan Region as determined by the economic development project encompasses seven of these areas. Located in the northern region is the Whittlesea growth corridor (encompassing South Morang, Mernda and Epping), which is projected to have the highest average annual population growth of an area in Victoria over the next twenty years (61,666 persons or 23 per cent per annum) and Craigieburn and Greenvale in the City of Hume also with substantial growth (43,120 persons or 5.5 per cent per annum). The north and western metropolitan regions of Melbourne have the highest levels of unemployment and the largest concentration of disadvantage of all Victorian State Government regions. According to the ABS Socio-Economic Index for Areas (SEIFS) there are thirty-two disadvantaged postcode areas across the region with a total population of 621,610, including sixteen of the most disadvantaged postcodes in the state (Vinson, 2004).

Local government in Australia has not traditionally had a lead role in economic or employment development. However, the role of local government is changing, with potentially dramatic changes on the horizon. In 1999, Best Value Principles for Local

Government were introduced in Victoria, and in 2003, the Local Government (Democratic Reform) Act was passed, with both increasing accountability for local governments within their communities and requiring increasing community involvement and participation. In the context of the community strengthening initiatives of the Victorian State government local government is also increasingly expected to take a leadership role.

At the federal level, a commitment was made to an inquiry into cost shifting in 2001 by a House of Representatives Economic, Finance and Public Administration Standing Committee. Its report in 2002 identified for the first time the real incidence of cost shifting from federal and state governments onto local government, and acknowledged the growth in functions of local governments (Parliament of Australia, 2003, p. 7). Recommendations from this report have translated into a new Intergovernmental Agreement regarding the roles and cost sharing of the three levels of government. However, at the time of this study, it is still in the process of being finalised and it is too early to determine how this will be implemented or taken up with the change in commonwealth government.

The case study will demonstrate that local government have taken a significant role in the regional economic development project in the Northern Metropolitan Region. This is described in more detail in Chapter 4 and 5, with examples of significant collaboration across LGAs, leadership in some areas as well as financial and in-kind support.

Education and Training

The Victorian Education and Training Department has responsibility for school education and vocational education and training within the framework of the Growing Victoria Together statement. It has focused on issues for young people and transitions and pathways to education, vocational education and training, and work. In 2000, the final report of the *Ministerial Review of Post Compulsory Education and Training Pathways in Victoria* was published. A key recommendation from this report was the establishment and phasing in of local planning networks for statewide coverage to

- develop collaborative approaches towards planning and improved delivery of post compulsory education and training programs and services
- investigate and trial key elements of regional coordination and delivery of programs (19, 2000).

These local planning networks were established as Local Learning and Employment Networks (LLENs). There were three LLENs established in the northern metropolitan area of

Melbourne and each covers two LGAs. The LLEN were identified as important entities in the regional development project because of the close alignment of priorities in education and training. The boundaries of the project were being reviewed and the decision was made to align the boundary of the region with the boundaries of the three northern LLEN.

There has been a quite varied performance across the LLENs. They were evaluated in 2002 and are now in their second phase of operation. The evaluation found there was widespread support for the LLENs but also found that there have been considerable difficulties in establishing a new system of co-operation and co-ordination amongst established agencies and projects. The main recommendations of the report proposed continuing support of the LLEN programme, allowing time for different communities to develop a shared responsibility for education and employment of young people, particularly fifteen- to nineteen-year-olds. The report found that LLENs had demonstrated their ability to broker and enhance networks that not only benefited young people but also supported regional development based on a more comprehensive model of 'joined-up' government (VLESC 2002, ii).

Another key program supporting the fifteen- to nineteen-year-old cohort was implemented in 2001. Managed Individual Pathways (MIPs) aimed to 'ensure that all students fifteen years and over in government schools were provided with individual pathway plans with associated support as a means to continued education, training or full-time employment' (DET 2005). It provided additional support to students at risk of disengaging or not making a successful transition to further education, training or secure employment. During 2005, an independent review of MIPs in government schools was conducted and found that 'MIPs is highly regarded in schools and described by some as possibly the best initiative introduced by the Government' and that 'there are two key elements of current MIPs practice, both of which should be retained: general pathway planning assistance for all post compulsory students, and focused intensive support for those most at risk of not completing Year 12 or equivalent' (DET 2006).

In the report *Setting the Pace*, prepared by the Education Foundation and the Business Council of Australia, Victoria was identified as 'not just … a leader in terms of actual youth transitions from school … the state became the national youth transitions policy pathfinder during the early 2000s' (2005, p. 6). The Victorian Education and Training Department has since reviewed the Education and Training Act and made a number of changes including the introduction of a youth guarantee which 'provides a guaranteed place in TAFE Institutions, the Centre for Adult Education, Adult Multicultural Education Services and participating adult

community education providers, to young people who have not completed Year 12 or its equivalent' (DET 2006).

These state policies and programs have been critically important in the regional development project and are discussed more fully in Chapter 5.

Melbourne

Overview

Melbourne is the capital city of Victoria and has a population of approximately 3.8 million of the total Victorian population of 5 million. As a result

> governance presents some interesting challenges, partly to do with the scale and influence of Melbourne (which has a small local government authority centred on the CBD) within the State of Victoria. Given that there is no unitary greater or metropolitan Melbourne regional level of government, meaning no formal level of government between State and local authority ('city') levels, it is hard to separate Melbourne city-region networks and planning from State efforts

> The problem of governance is compounded even by ambiguity about the boundaries of the Melbourne city-region. The *Melbourne 2030* study considered the zone of influence and planning for Melbourne which extends, in terms of commuting, local markets and labour markets, to include a ring of large towns (cities, in Australian usage) such as Geelong, Ballarat and Bendigo. Victoria underwent major restructuring of its local authorities under the previous conservative, liberal state government, but the metropolitan area remains divided between the small City of Melbourne and many other 'city' authorities that amongst them cover the whole metropolitan area. There is much contact and traffic between local authority and State levels of administration, and attempts to work more in a 'place management' way across portfolios like health and education; but the governance of greater Melbourne, and its articulation with the different networks and interests inhabiting its space, remains problematic (Wilson 2005).

The Melbourne City LGA which covers the CBD takes some leadership in city issues. It has for example started a Vice Chancellors Forum with Vice Chancellors from every university represented in Melbourne and an *Office of Knowledge City* initiative which aims to bring funds together to support education, industry and local government working together for Melbourne (MCC 2006).

The gap in city governance has been also been addressed by the Committee for Melbourne which was established in 1985. It is a private not for profit network with one hundred and seventy member organisations represented by Chief Executive Officers and top executives from business, community and institutions of Melbourne funded by membership fees and project funds. The mission is 'to act as a non-political, courageous, innovative and far-thinking catalyst to enhance Melbourne as a dynamic, commercial, technological, intellectual and cultural capital of the world—while extending its position as the world's most liveable city' (Committee for Melbourne 2006). Initiatives in 2006 included a Climate Change taskforce, a Higher Education taskforce and a Transport taskforce. Other examples of its initiatives include a role as a founding partner in the Melbourne Prize Trust, which promotes urban sculpture, music and literature; the Bio Melbourne Network which advances business development and commercialisation in biomedical research; and bringing the UN Global Compact Cities program to Melbourne and hosting the secretariat. The organisation is influential due to significant players in their membership and claim they have been instrumental in the establishment of Melbourne Docklands and the privatisation of the Melbourne Airport (Committee for Melbourne 2007).

Melbourne's city centre is frequently described as the most European of Australian cities and has ranked as one of the world's most liveable cities in *The Economist* rankings for three years, in 2002, 2004 and 2005 (Wilson 2005). Melbourne is also a business capital, with the largest port in Australia, much of the country's manufacturing industry and a strong ICT industry employing over one third of Australia's ICT workforce (Business Victoria 2006).

Culture and Diversity

Cosmopolitanism is a distinguishing feature of Australia and particularly of Melbourne. The presence of so many large language, cultural and ethnic communities with strong overseas links, and the high level of positive acceptance and valuing beyond mere tolerance, underpins the sense of an open and cosmopolitan society which welcomes newcomers and business from all places (Wilson 2005). Melbourne is also home to the largest number of international students in Australia.

The Northern Metropolitan Region of Melbourne is highly diverse. It has the highest numbers of Indigenous Victorians in the metropolitan area, concentrated around the suburbs of South Whittlesea and Preston, and also contains the highest proportion of people from non-English speaking backgrounds. Some key LGA based statistics which provide a snapshot of the region include

- 71 per cent of people across Victoria are born in Australia, compared to 61 per cent in Darebin

- the Italian born population in Moreland is 15 per cent, compared with the Victorian figure of 3 per cent

- Darebin and Hume have a total of 10,713 Arabic speakers, which is 23 per cent of Victoria's total.

These statistics differentiate the northern region, from the east and southeastern regions of Melbourne. The region has much more in common with the western region, which has similar diversity.

Northern Metropolitan Region

Overview

The Northern Metropolitan Region, as defined in the regional economic development project, consists of seven LGAs: Whittlesea, Hume, Nilumbik, Banyule, Darebin, Moreland and Yarra. It has a culturally diverse population of approximately 750,000, with areas of dramatic socio-economic contrast, ranging from very prosperous to severely disadvantaged, as well as ranging from inner-city to suburban, rural interface and rural areas.

Manufacturing

Manufacturing is a strong sector in the region and is considered important for strategic development because it 'creates technology ... producing complex and elaborately transformed products which are skill, knowledge and innovation intensive. 'The sector employs 16.5 per cent of the region's residents and the value of its output represents 19.5 per cent of manufacturing of Victoria and 7.8 per cent in Australia. There are 3,619 manufacturing enterprises in the region, with only 289 of these categorised as large companies of more than 50 persons (Shepherd 2003).

In the region there have been serious and continual changes in industry: the ongoing loss of larger companies, the demise of the Textile, Clothing and Footwear industry and the increasing relocation of manufacturing off shore. Many of the companies are SMEs and the current environment brings increasing pressures to operate differently in a more competitive and international environment. The Industry Network aims to support enterprises to adopt new technologies, innovations in product and processes, and respond to and create new market demands through innovation to supply niche or new markets in a global environment.

Regional Development

There is growing commitment in the Northern Metropolitan Region to a vision of an integrated economy. This is being led by the NACC and the industry network, NORTH Link/NIETL, which has developed a wider remit. The project has had strong take-up by local governments at council level, with CEOs and with the economic development groups from all councils in the region. Work is underway with education institutions and local organisations such as LLEN, to extend the ownership and action to support this direction.

The research for the economic development project was commissioned by the NACC and undertaken by the National Institute of Economic and Industry Research (NIEIR). *Growing Melbourne's North—Developing an Integrated Economy* was launched in August 2003 and provides a detailed analysis of the region, including

- the role industry has played in the past

- an evaluation of recent changes in industry structure

- an outline of a number of national and state issues which impact on the region

- an evaluation of the regions success as a provider of the highest quality income and employment opportunities for residents

- the strength of the region and sub regions in comparison to the rest of Melbourne

- recommendations to assist the planning for the future success of the region (Shepherd 2003).

It evaluated the 'strength in the region' using an analytical tool combining indicators grouped under the headings of

- Households: high skills, exposure to low skills, non job readiness

- Workplace Skills

- Capacity: manufacturing retail, government/education, business services

- Local economy: creativity, employment generation ratio, high tech capacity, power employment

- Outcomes: productivity, labour utilisation

- Occupational Balance

- Opportunity cost of travel.

  - (Shepherd 2003)

The research concludes that 'the region has the potential to achieve significant economic and social benefits if stakeholders share resources and cooperate across local government boundaries to form a discrete economic zone' and it includes 'benchmarks that will support growth and quality employment outcomes for the region' (Shepherd 2003). Employment was identified as a critical outcome in the development of an integrated economy in the Northern Metropolitan Region. This is reflected in the number of projects concerned with generating employment.

In building from a strong manufacturing base there are very real questions about the ways to develop the region, particularly employment in business and service sectors, and advanced manufacturing in the 'new' knowledge economy. Maglen and Hopkins (2001) undertook a study of the Australian labour market based on the classification of workers as 'symbolic analysts, routine production workers and in person service workers' (Reich 1992) which found Australia has amongst the highest rates of part time and casual work amongst all OECD nations. This is very much a feature of many of the local government areas in the Northern Metropolitan Region, with very high rates of un/underemployment in some areas. There is also a high exposure to low skills and 'non-job-ready' residents in these areas, a remnant of the employment patterns in the old manufacturing economy (Shepherd 2003). However, some of these areas are also the location of new and expanding enterprise requiring workers with different, knowledge economy skills.

The region is experiencing a noticeable increase in polarisation, with pockets of severe socio-economic disadvantage. Parts of the region rate well against measures of employment, levels of education, and innovation measures but there are clearly serious issues of access, equity and social inclusion in others.

In the assessment of the Northern Metropolitan Region, the *Growing Melbourne's North* report concluded the region was performing well although there was considerable variation amongst the LGAs. Moreover, when compared to the eastern metropolitan region, the region was found to be lagging. The report set benchmarks for the region to be achieved by 2015, which have set the framework for the planning of the regional development agencies, NORTH Link/NIETL and the NACC and a number of the LGAs.

Conclusion

Taken altogether Government policy has set directions and driven outcomes which have been positive for the region. The settings have driven the industry network to support the enterprises to position themselves in a global market through the development of their

management, export capability, skills of employees and technology. The settings have also supported the work with young people and the ability to develop projects responding to specific local needs. The regional economic development project has remained attuned to policy and programme initiatives throughout its history. Government policy and funding has played an important role in sustaining the networks and the development of new projects. On occasion the region has also played a lead role in policy and program development, for example in the work on the Whittlesea Youth Commitment discussed in Chapter 5 and in smaller activities in industry programs as described in Chapter 4. The Whittlesea Youth Commitment also provides an example of the challenge for government to implement policy which accommodates local conditions. The difficulty in accommodating the local effort is a theme in the regional economic development project. Individual policies work but there is not a coherent or integrated approach which makes sense of policy across the levels of government in the region.

This chapter provides context for the research undertaken in this thesis. Although not a policy study, a strong motivation in the work is understanding better how policy impacts and what might inform its development. The questions of this thesis demand understanding of a context which incorporates local, national and international elements. Innovation and industry development occur in a global economy with national and local influences salient in the mix. The learning region is also a mix of the local and the global, which raises questions of local, regional, national and international influences and levers for change.

The following two chapters develop the case study with Chapter 4 focusing on the development of the industry network and then Chapter 5 expanding to the regional development project.

Chapter 4

The Industry Network

Chapter Summary

This chapter developed from the case study of the industry network NORTH Link/NIETL located in the Northern Metropolitan Region of Melbourne. In approaching this work I set out to answer the research questions 'Is there learning and innovation in the industry network and if so how does it occur?' The relevant literature is in areas of knowledge and learning, the knowledge economy, lifelong learning and innovation. I describe the industry network and how I determined that there were three experiences of the network using the communities of practice framework, and a model of practice based on research, collaboration and partnerships. I explain how my work on this network led to the further exploration of the economic development project in the region through the use of the concept of communities of practice.

Knowledge Economy

This study sits within a global context and current debates about globalisation shape the case study and theory development. Globalisation is 'the many ways space and time have been compressed by technology, information flows, trade and power so that distant actions have local effects' (Giddens 1994). Castells conceptualised this world as a 'space of flows superseding the meaning of the space of places … where the new international economy creates a variable geometry of production and consumption, labour and capital, management and information—a geometry that denies the specific productive meaning of any one place outside its position in a network …' (1991, p. 348).

With the rise of global capitalism came the dominance of free market economic policy. Initially this resulted in corporatist and managerial western governments with strong adherence to market rules and a position that the role of government is to allow the market to operate. Upsetting this position was the inability of the neo classic economic theory to deal with technological change and innovation; as innovation became so central to competitive advantage, a new paradigm emerged called 'variously, new growth theory, evolutionary economics or new institutionalist economics which privileges innovation as the driving force for economic change' (Berry 2003, p. 16). By the late 1990s, this was influencing governments and policy, with a broadening ' focus on governance and the interdependencies between political leadership, public administration and the community as well as between

national and international arenas (Marsh 2002, p. 24). Morgan suggests this 'network paradigm overcomes traditional antimony between state and market by asserting the interdependence of public and private agencies' (Morgan 1997, p. 491). Considine tests whether this is a new 'space between the old dichotomies of state and market, public and private, local and global' (2005, p. 1). In this study the network paradigm is also a space to examine how learning occurs and knowledge is exchanged.

The combination of industrial, regional, social and environmental agendas has led to the concept of the 'knowledge economy' in international discourses. McKeon and Weir (2001) argue that 'the primary thesis of the knowledge economy is the centrality of the crucial role knowledge, in all its forms, plays in processes'. A knowledge based economy is 'an economy in which production, distribution and use of knowledge is the main driver of growth, wealth creation and employment across all industries' (2001, p. 5) They note the pervasiveness of innovation, technological change and human resource development, and the importance of efficient infrastructures, especially in ICT, and of a business environment that is supportive of enterprise and innovation. ICT and other technologies have multiplied the production and hastened the obsolescence of knowledge. Access to new knowledge and exchange of knowledge are critical needs, and communications systems are central to the knowledge economy.

At a more basic level, the bulk of productive activities in the knowledge economy are knowledge based. The process of knowledge generation produces positive learning externalities hence the more that is produced the more opportunity exists to generate new knowledge. Central to the arguments for the evolution of a knowledge economy is the importance of the growth of knowledge intensive industries for the future of regional and national economies (in Keating et al. 2002, p. 17). The OECD points out while 'knowledge is the central element of the emergent mode of production' in the learning economy. 'Knowledge in itself does not contribute to economic growth … [and] … the effectiveness of investment in human capital is dependent upon the operation of the labour market, as well as upon the organisation of production inside enterprises' (OECD 2001 networks, p. 11). Economic policies, therefore, need to concentrate upon the 'creation, diffusion and use of knowledge' (OECD 2001 networks, p. 9).

Defining Knowledge and Learning

This discussion of knowledge and learning is located within the knowledge economy and fields of organisational learning rather than fields of science and biology or psychology. Even within this field there is no single way of categorising knowledge and the meaning is

contextualised in the endevour to understand knowledge in organisations and how this supports understanding of innovation. The interest in this study is the support for a social process of learning and the place of knowledge both within organisations and in networks. Knowledge is described in the work of Nonaka and Takeuchi (1995) as; codified individual, codified collective, tacit individual and tacit organisational (p. 45). Gibbons et al expand on this in the explanation that

> knowledge can be codified which need not be exclusively theoretical but needs to be systematic enough to be written down and stored … and available to anyone who knows where to look … tacit knowledge, by contrast, … is not available [as it is] embodied in a particular organisational context. This can be complimented by a parallel distinction between migratory and embedded knowledge ... the former mobile and can move rapidly across organisational boundaries and the latter less so its movement is constrained in a given network or set of social relations (p. 24).

Lundvall and Johnson (1994) proposed the now widely accepted taxonomy of know–what, know–why, know-how and know-who. Simply, know-what refers to facts, know-why refers to knowledge 'about principles and laws of motion in nature, the human mind and society', know–how is skills and know-who involves 'information about who knows what but especially the capability to establish relationships' (p. 23). Blackler (1995) developed a typology of five types of knowledge in the literature which he described as 'embrained knowledge (development of conceptual skills and cognitive abilities), embodied knowledge (action oriented), encultured knowledge (process of shared understanding), embedded knowledge (resides in systemic routines) and encoded knowledge (information conveyed by signs and symbols)' (pp. 48-49). Knowledge could not be defined only as something possessed by the individual or in parts of the firm. The different types of knowledge were then understood in a dynamic environment.

Argyris and Schön are widely credited with seminal work on conceptualising the learning organisation. They identified single loop learning, which was a feedback loop, and double loop learning, which changed assumptions of individuals and opened the way to 'learning behaviours' (1978, p. 117). Nonaka and Takeuchi contributed further by examining how individual knowledge is brought into the organisation. They discuss *'ba,'* a shared space for emerging relationships where trust is high and exchange is fostered to create knowledge (1995). The collective or social processes within the firm were highlighted as relevant and leading to knowledge and learning (Amin & Cohend et al. 2004). Central to this thesis is a 'social theory of learning' (Wenger 1998, p. 3). Wenger's work also began in the context of

organisational learning. His theory is based on the assumptions that 'we are social beings, that knowledge is a matter of competence with respect to valued enterprises (for example singing in tune), that knowing is a matter of participating in the pursuit of such enterprises … and active engagement and the ability to experience our world and our engagement with it as meaningful' (p. 4). Learning is defined as social participation which is 'being active participants in the practices of social communities and constructing identities in relation to these communities' (p. 4). As introduced in Chapter 2 in his follow up work, *Cultivating Communities of Practice,* Wenger suggests there is potential for this theory to advance the support of learning beyond organisations. This study uses Wenger's communities of practice to understand learning in an industry network. The use of the communities of practice framework supported the understanding of learning across the boundaries of organisations, how knowledge was shared and learning was supported.

Examining learning focuses attention on the firm and the regions capability to learn but also to forget or change practices. 'Knowledge creation is … strongly path-dependent as today's practices, routines and types of knowledge are related to those of yesterday, just as those of tomorrow will be related to those of today' (Nelson and Winter 1982). The inability to change is described as path dependency. The culture of a location may support innovation or it may support old habits and resist change. The position of a region is based on its history and the directions taken at critical points which result in success or poor performance (Scott 1995, p. 56). This is an area that is poorly theorised and there is not a great deal of understanding about how some regions learn and change their direction (Gertler 1997). This may be partially understood through the role of institutions which are our stable, valued, recurring patterns of behaviour (Goodwin 1992, p. 22). Edquist and Johnson argue that the institutions are the 'things that pattern behaviour' and 'consciously created things' such as organisations are conceptualised separately (1997, p. 43). However, the work on innovation accepts that organisations are 'nested within (and shaped by) the broader institutional environment in which they are situated' and are therefore not separable (Gertler 2003). Amin suggests developing an 'institutionalist' perspective which is 'informed by the experience of more prosperous city regions.' However, he warns that this perspective must 'recognise the collective or social foundations of economic behaviour and not degenerate to localist sentiment, as the macro economic levers are in the hands of the government'. (1995).

Knowledge and Learning in CRITICAL

The CRITICAL project was developed with the objective of testing the concepts of knowledge and learning in the city region through comparisons of different city regions, to support the development of policy which addresses the following challenges:

- Achieving competitiveness in a knowledge based society: business performance and the competitiveness of the sector or cluster

- Cosmopolitanism and image: cities as centres of cultural consumption and diversity which contribute to innovation (Hall and Landry 1997) and positive or negative image

- Social polarization: a city can generate wealth, but unless there is equitable distribution social tensions of a city may erode the qualities that make it attractive (Van Winden 2001)

- Sustainability: environmental problems of nose, air pollution, water pollution, traffic congestion and water and energy consumption

- Governance: fragmented local authorities, co-ordination is limited and central government relations may not differentiate roles and responsibilities of the city in its region.

It also examined the 'attractively simple argument' that 'the encouragement of all learning at all walks of life will underpin other policies and facilitate the urban renaissance' (Charles 2003, p. 7).

In the CRITICAL Project learning was 'critical' and was seen as originating from two main bodies of work with dramatically different interpretations:

- Learning society and lifelong learning

- Learning economy and systems of innovation (Charles 2003, p. 3).

These are discussed here and further examined in Chapter 6.

Lifelong Learning

Introduction

The two main bodies of work differ primarily in their development of the purpose of learning. In the Learning Society learning empowers the individual, develops professional and personal expertise and also supports the development of civil society. In the Learning Economy the individual learns to develop professional skills and expertise and this supports the development of the firm and the innovation system. There is additional complexity in this discussion because of the place of lifelong learning in policy. Lifelong learning is often defined by policy makers, so theory and science lag in the field of policy (Collins 2003, p. 4). Duke uses the OECD definition 'all purposeful learning on an ongoing basis with the aim of improving knowledge, skills and experience' and suggests it is 'as good as any' (EU 2000 in

Duke 2003, p. 1). This is, however, a definition in a 'contested space' and since the 1990s has been described as 'increasingly a tool for the reform and modernisation of aspects of national education and training systems' (Field 2001 in Duke 2003, p. 3). Lifelong learning has become the catch cry for learning to enable individuals to cope with uncertainty but will fail according to Edwards (2002) because it continues to deal with 'individuals with choice and who know what to learn' rather than recognise the 'reconfigured individual and social groups' (in Charles 2006, p. 8). Other criticisms are that it categorises the individual as a consumer of learning, suggests learning is a linear process, ignores types of knowledge and that it is now a tool in neo liberal positioning that lifelong learning is about the contribution individuals make to the economy. Hence learning is treated as a commodity (Collins in Charles, 2003).

Lifelong learning in the CRITICAL Project

In the CRITICAL Research project there was considerable discussion on lifelong learning. Three discourses were identified taken up from the work of Borg and Mayo (2002). This discussion grew from the wide range of bodies of literature which inform the theorising and development of the concept and practical reality of the learning region.

In the literature of innovation and clusters the key actor in the system is the firm and the individual chooses his or her learning to further options and enhance career and prospects. Learning supports the learner's progress, the firms success and innovation. This was discussed as the 'homo-econimous' discourse.

> The learning homo-economicus is an individual actor who accumulates skills throughout his life as a way of entering into and progressing through the labour force. Piper further highlights that there is a concentration in the literature on 'individuals as opposed to people and that individuals in the literature are constructed as producers and consumers, unfettered by dependents, undirected by institutions and able to correctly calculate and follow the best course through the learning field' (2000, p. 14). The characteristics of the actor are not outlined, but work within economics has highlighted his white male middle class nature (cf the articles in Ferber & Nelson 1993). This discourse relies heavily but implicitly on the Smithian invisible hand: the idea that everyone pursuing their own interests will lead to the best interests for all. Finally, this discourse leads to the ultimate conclusion that if individuals do not fit into the new learning society then it is their own responsibility (CRITICAL Draft report 2006, pp. 8-10).

The learning region suggests the striving for a better society and a society which is inclusive with policy and programs that balance social, cultural and economic development. In this discussion, learning furthers the society's goals and supports the individual's development. In the CRITICAL discussion the second discourse was discussed as the learning-for-the sake-of-learning discourse (sometimes refereed to as the humanistic discourse and what Alheit and Dansien (2002) refer to as the educationalist discourse). This argues that individuals are best fulfilled and developed by constant ongoing participation in multiple 'life wide' forms of learning. The actor undertakes learning for the love of learning. However, as Edwards (2003) argues in this discourse there is a clear decontextualisation of the learners and class, gender and ethnicity that are constructed as personal characteristics. The actor is again individualised. Development of the actor is, again, unproblematic and his development leads to individual and social good but on a broader set of criteria than the 'homo-economicus' discourse. The invisible hand now ensures economic, social and political wellbeing. Edwards (2003) highlights that this discourse is linked to a discourse of a counselled society. Each individual promoting his own growth potential will be good for society.

The discussion of greatest interest in the CRITICAL project was the social learning discourse. It was this discussion which informed the adoption of Wenger's framework of the communities of practice. In this discussion it is acknowledged that the learner's circumstances will influence their learning and opportunity for learning, and, importantly, that the individual and the society is changed through learning.

> In the collective social learning discourse the idea of learners as individuals who are able to foretell and promote their best interests is rejected. The actor is positioned in his social milieu; this social positioning affects his participation in learning. Sultana (2003) reviewing several EU projects on learning found that race, age and gender did indeed mediate access to learning. This means that there will be included and excluded groups. This strand explicitly recognizes that inequality that can arise from the learning project without really providing a solution to that inequality. Emancipation through learning is learning for only a few. This discourse focuses on the individual changing social structures and engagement by individuals in a relevant social setting with intersubjective processes that promote greater empowerment, reciprocity and equity (Edwards et al. 2002, p. 530). (CRITICAL Draft report 2006, pp. 8-10)

The actions to support learning are different within each of these philosophical frames:

> In the economistic it is action by individuals and firms and increasing action by the state on behalf of firms. In the humanistic it is action by the state

unconcerned about the needs of firms and finally the social discourse has action by communities (CRITICAL Draft report 2006, pp. 8-10).

Using the communities of practice framework the CRITICAL project sought to understand learning as a social process, accepting the learner as a social actor and that the study of learning processes in different arenas would support better conceptualisation of lifelong learning and potentially better policy frameworks. This thesis pursued this and sought also to understand how learning was supported in networks. This is further discussed in Chapter 6.

Learning Economy

The field of theory focused on innovation and the learning economy began largely with the premise that the important 'actor' in the economy is the firm. Competitive advantage is based on innovation which means enterprises must be entrepreneurial and innovate to support economic growth and development. A key focus has been on understanding how innovation occurs and what supports innovation.

Innovation Systems

Shrumpeter 'inspired serious consideration of innovation as the main source of dynamism in capitalist economic development' (Simmie 2001 in Berry 2003, p. 17). He described it as 'creative destruction' and defined it as new products, drawing on new technologies, exploiting new sources of supply and introducing new forms of business organisation (p.16). The other common understanding of innovation is 'marshwellian' and describes innovation as incremental. Innovation is no longer understood as a linear process with R&D as the input. It is now widely understood as cyclical and interactive with socially and geographically embedded processes which have become extremely important in the work in regional development. The path dependent nature of innovation and the requisite social conditions are of major importance and are the basis of much of the body of work in this field.

Early work on National Innovation Systems (Lundvall 1992, Nelson 1993, Edquist 1997) was partly in response to understanding the role of the nation in the innovation system in a context of globalisation and potentially a changing and diminishing role for the state. Regional Innovation Systems (Braczyk et al. 1998) took up this work at the regional level. Both took a systems approach and included public institutions, research and business organisations, enterprises and the culture affecting the innovative milieu.

Discussion at the regional level now encompasses the concept of learning regions (see Chapter 6). This body of work examines innovation systems or innovation milieu at a regional level in a national and supra-national context because of the increasing focus on social

interactions and effects at that level and the increasing influence of the global environment (Lundvall and Borras 1997, Cooke 1998, Porter 2000, Asheim, Isaksen 2002). There has been a move away from the notion that 'geography is dead and the nation state unimportant' as it is accepted that 'globalisation and localisation, far from being mutually exclusive processes, are actually much more interwoven than is generally acknowledged' (Morgan 1997, p. 495). Richard Florida (2003) supports this, finding that specific locations are attractive to the drivers of innovation and it is a pool of creative workers who drive the growth and competitiveness of the region. The term 'sticky knowledge' (Morgan 1998) is also used to understand how knowledge which is located with individuals in a region and is accessed by others who know them and their work.

Innovative Milieu

The 'innovative milieu' represents specialisation around a technology or industry, networks of firms and institutions and generally entrepreneurial firms where knowledge flows across boundaries providing access (for example Saxenian Lundvall, Gertler). Geographical proximity between firms also makes possible the reduction in transaction costs through inter firm transactions or 'traded dependencies'. Although it is not necessarily true that firms located near each other will actually be linked in the production chain they may benefit from 'untraded dependencies': benefits through the development of a labour pool and sharing of knowledge supporting innovation. Amin and Thrift also argue that the socio-cultural basis of agglomeration is important and facilitates 'places of sociability, of gathering information, establishing coalitions, monitoring and maintaining trust, and developing rules of behaviour' (1994, p. 13). These are networks where 'people communicate, share information, and build relationships and reputations' (Wenger et al. 2002, p. 42).

Tacit information is embedded in the system and its networks and is therefore difficult to transfer (Malmberg and Maskell 1997, Morgan 2001, p. 15). Porter (1995) introduced the concept of clusters and used a 'diamond analysis' to identify cluster characteristics of; talent, technology and infrastructure, sophisticated home demand, critical mass of local suppliers and local competition (1990). This has not proved to be a definition which is universally recognised and there are numerous cluster initiatives which aim to create synergies between industries, firms and other actors. Regional institutions do play a role here in supporting the activities which bring the actors together and develop the norms and conventions of the region. Porter (2000) identifies a role for government to support cluster initiatives through policy, infrastructure and the sponsorship of cluster development and activities (p. 33). There is a vast amount written on clusters and generally agreement that clusters go through stages

or a 'life cycle', that firms collocate for competitive advantage and that inter-firm cooperation is required (Anderson et al. 2004).

Trust

Trust is an important consideration in cooperation and is identified as a key feature in innovation systems. Considerable work highlights the reduction of transaction costs and untraded interdependencies amongst firms. Furthermore trust as a logical pre-requisite for the exchange and sharing of knowledge. Sabel (1992) finds that regions with high levels of trust share a characteristic of a 'folklore or story' and that this is inevitably the 'story' written to explain how the region overcame some issue or conflict. The story 'masks the negotiated compromise that helped to overcome the conflicts and resolve the crisis' (p. 229).

Recently a focus has developed on how relationships do cover distance and time and how trust is developed in ways which do not depend on co-location. Amin and Cohent are examining 'distanciated relationships, virtual, organisational, technological hybrids—which make trust, intimacy and familiarity possible over distance' and they identify 'firms, decentralised, with a web of global and local alliances and partnerships and supply chain, linking dispersed and locally rooted knowledge resources' (2005, p. 471).

Manufacturing

Manufacturing is identified as an important component of the regional economic development project and the renewal or transformation of traditional manufacturing and low to medium technology industries is central to the project. Innovation exists in all industries and this can be driven in manufacturing by the 'bundling of product with services' and where services are an integral part of the manufacturing process, or support manufacturing processes (Castells 1998, O Connor 1999, Maskell 2001, Marceau & Martinez 2002). Manufacturing creates technology, is responsible for 'elaborately transformed manufactures' which are 'skill, knowledge and innovation intensive and it creates upstream and downstream linkages with other industries' (Shepherd 2003, p. 93). Smith (1999) argues that the indicators of innovation privilege some sectors above others because they focus on formal R&D and patents he suggests that

> most so called low tech sectors are intensive in their use of scientific knowledge such as food production, machinery, printing and publishing, wood products and a range of services, have significant indirect science inputs. The depth and complexity of industry knowledge bases are not linked to their direct R&D performance … These science inputs are supported by complex, indirect links with universities, research institutes and supplier companies. Thus low tech

industries are frequently part of high tech systems and policymakers should be aware of their significance for growth … Growth is not primarily based on the creation of new sectors but on the internal transformation of sectors which already exist. This internal trans-formative capacity rests in turn on complex innovative systems which create, distribute and maintain advanced knowledge (Smith 1999 in Martinez 2003, p. 21).

Bender (2006) in a European study of innovation in low to medium technology industries found 'firms commonly solve a technological problem by solving jointly with other firms' (p. 24). Firms work with others that have better capabilities and get inspiration, guidance as well as testing and intellectual challenge' and through these interactions they 'engage in complex, adaptive activities to make technological innovations suitable for their own ends' (p. 34). This study also concluded that 'organisation practices—knowledge management and personnel policy in particular—play a vital role for competitiveness and innovativeness of low to medium technology companies' (p. 8). The role of export and developing export capability in the success of firms, and the relationships developed with markets and suppliers globally, is the other important element in innovation in this sector.

Manufacturing is considered a strategic industry because

- there are strong upstream and downstream linkages
- they are industries which, in the main transfer leading edge technologies to the local economy
- they are industries that develop the skills, work organisation arrangements and new management techniques which, through labour turnover, supply chain networks, spill over to the rest of the economy, thus transforming both technology and knowledge to other important industries, including technical and service industries (NEIR, 2000, p. 9).

Kevin O'Connor (1999) spoke to the *Committee for Economic Development of Australia* and concluded, succinctly that 'only where manufacturing has been nurtured will the service jobs appear' (p. 2). This directly supports the position taken in the Northern Metropolitan Region that manufacturing must be saved if other industries are to flourish and if the region is to retain and develop employment opportunities in the knowledge economy.

Policy and Government

How manufacturing might be 'nurtured' is a pertinent question to governments and regional

economic development efforts. Government still has considerable impact and influence though labour market regulations, education and training, and infrastructure development but also through regulations that influence product quality, government purchase and taxation policy (Edquist and Hommen, p. 66). Berry summarises the key areas of discussion when he describes a 'broader and more strategic canvas for government policy' and cites Hofer and Polt (1998, pp. 12-13) that innovation policy needs to

- create and support institutional pre-requisites for steady, continuous change. This necessitates a particular concern to foster investments by small and medium sized firms to reduce what Brain (1999) has called 'the risk management constraint' on investment. Many innovations and 'new waves' are unleashed by small businesses or individual entrepreneurs. Microsoft and Apple started in basements or garages.

- be process oriented, concerned with system design. Policy must focus on setting the rules, encouraging the flow of ideas, shaping relationships between industry participants, getting the incentive structures right and generally inculcating an entrepreneurial culture.

- stimulate more than research and be more concerned with the 'D' end of R&D. This points to a concern for improving general qualifications and skill levels in the work place, establishing appropriate management styles and employee relations, and encouraging the faster dissemination and 'take-up' of publicly available knowledge throughout industry. 'The procurement of information and knowledge, their dissemination and processing, of no consequence in the neo classical view are (from an evolutionary perspective) central policy recommendations.

- systematically influence general community long term expectations in order to develop a lasting social consensus regarding continuous technological change and adaptation.

- explicitly support and legitimate experimentation and experimental behaviours in industry. A learning organisation in part learns from its mistakes.

- be experimental and adaptive itself.

This leads to the discussion of the industry network case study. In this study the support for innovation is mixed and considerable leadership and impetus comes from the regional project with the challenge of procuring funds from government programs. The policy initiatives have mixed results and the settings are not necessarily following the broad directions outlined above. There is little consideration of how support for innovation is linked

to the wider society as well as the education system. The potential to better direct policy to support innovation is explored through this case study and is examined in more detail in Chapter 6 in the more comprehensive framework of the learning region. The rest of this chapter reports directly on primary data gathered as part of this project.

The Industry Network Case Study

NIETL—The Northern Industry Education and Training Link—was established because of dramatic changes in government policy at both federal and state level, as discussed in Chapter 3. A Northern Suburbs Industry Symposium was called in 1987 to discuss the restructuring of the Australian economy and how these changes would impact on the region. A working group was formed at the symposium to take up issues and formulate some action. The group consisted of education, industry, local and state government representatives concerned about economic prosperity, employment and the importance of manufacturing in the Northern Metropolitan Region of Melbourne. This region had a significant proportion of the manufacturing industry in Australia and these groups had immediate concerns regarding the changes.

The restructuring of industry with the reductions in tariffs, the increasing need to export, the requirement for quality systems and certification, and changes to funding and priorities for training institutions were the drivers for the working group who came together at the symposium. The tertiary institutes in the region were concerned about changes to their funding base and the clear directive to be connected to industry. Industry across the region was going to be dramatically affected and many enterprises were under serious threat from the changes given the concentration of companies in the Textile Clothing and Footwear and Parts and Motor Vehicle sectors. The government representatives in the region also saw these issues looming and were anxious to develop responses which would support their constituents and their political activity.

Two priorities were developed: the Industry network to support changes in the enterprises; and the schools based initiative, NIECAP, to support better pathways into technological and engineering education. There was a sense that this was a crisis and although there had been some prior activity across local government boundaries this 'brought people together with a strong sense of purpose' (interviewee).

Regional Organisations

A number of organisations existed in the region over this establishment period which supported or intersected with the development of this network. There was a North Eastern

Region organisation of councils that included some councils which split into north and east over time. The was also a Northern Region Commission which was established and funded by the local councils of Preston, Northcote, Brunswick, Coburg, Gisborne and Bulla.

In the early 1990s, the North East OLMA (Office of Labour Market Adjustment) was in place and also from OLMA, the Inner North Business Council. These were initiatives which came with the restructure of the industry to support the enterprises in the TCF/PMV industries and were funded by the Commonwealth Department of Education Employment and Training.

The Northern Area Consultative Committee (NACC)

The Northern Area Consultative Committee (NACC) was established in 1993. It was a regional economic development approach focused on employment outcomes under the federal departments of Education Employment and Training and then Employment Workplace Relations and Business. The NACC was one of the ACCs to survive the change of government in 1996 and then came under the Department of Transport and Regional Services with a new charter and a broader focus about local partnerships to address local issues. The NACC worked very closely with NORTH Link/NIETL. The chair and executive officer of the NACC were on the board of NORTH Link /NIETL and the executive officer of NORTH Link /NIETL was on the NACC. Working groups, projects and events often involve members from each.

Northern Interactive Education Collaborative Area Program (NIECAP)

Established around the same time as NIETL in 1989 at Phillip Institute NIECAP was a Collaborative Area Program (CAP) funded by a State government education initiative. It was very much part of the vision which established NIETL. NIETL was to focus support on the manufacturing companies, providing information, networking and assistance to improve business across the region and particularly building links across industry and education to skill the workforce. By way of contrast, NIECAP was to support science and technology education. Its aim was to support schools to provide quality education and working from a grassroots level to support the development of the manufacturing industry, changing perceptions about careers in manufacturing and attracting/supporting student pathways into science and technology education, training and employment. NIECAP and NIETL worked closely together, tendering for projects or using their complementary networks to leverage outcomes.

When the Phillip Institute was amalgamated with RMIT University support continued for NIECAP and it became part of the Northern Partnerships program. It operated until 2006 when it became Youth & Community Partnerships with a brief focused on equity pathways.

The Northern Regional Economic Development Organisation (NREDO)

In 1995 the Northern Regional Economic Development Organisation was established as New Edge—Melbourne's Northern Economic Wedge Inc. It was relaunched as NORTH Link in 1996.

The establishment of the REDO was a political and contested process and brought together competing interests. In the north it was started by the Northern Region Commission which was to be superseded by the REDO, which meant there was 'considerable wrangling over seats at the table before the proposal was even drafted' (interviewee). REDOs were expected to be very influential as they were to have a substantial budget, access to infrastructure funds in a competitive process and members of their boards drawn from senior ranks of organisations in the regions. Its development and establishment generated conflict within the NIETL and NACC community as there were clearly concerns about the roles of these organisations with overlapping areas of responsibility and dependence on the local organisations now very focused on the REDO.

The balance of power was delicate, with the election for the inaugural chair decided by one vote. In one version of the story the deciding vote was made not by casting a vote but by putting the two names in a hat and drawing the 'winner.'

The Northern REDO had a board of seventeen community and industry representatives; seven from education and training and nine local governments. Initially, the REDO had funding from the Federal government, from the local government members and from the State government. The federal funds were in the order of $250,000 the first year, $150,000 the second and $75,000 the third based on increasing support from the local bodies involved. It employed an executive director, an administrative assistant and two project workers. It also funded the development of strategy for key infrastructure projects with the following priority areas:

- Airport gateway
- Education
- Environmental Enhancement Amenity
- Networking and Business development
- Marketing and promotion
- Transport and Communications and

- Tourism

From these developed eight project areas. They were titled:
1. The multi modal freight exchange
2. Greater regional self containment in supplies to the electronic and telecommunications industries
3. Textiles, Clothing and Footwear development
4. Industry Development through links to education
5. Airport development Opportunities
6. Marketing the Region through Regional Ambassadors
7. Business Incubators/Enterprise development
8. Viticulture and Wine development.

Consultants were hired to manage the development of the projects and strategies informed by a required number of forums and input from key stakeholders. The expectation was that these would form the basis for bids for substantial Commonwealth funds for implementation. This did not eventuate and the REDO existed for a relatively short time and is judged to have been largely ineffectual. It was plagued by problems within its office, change in personnel and great difficulty managing a board with diverse interests and little hands on involvement. People did question what it was accomplishing with 'little to show for efforts beyond work from consultants and a showy relaunch with new name and logo' (interviewee). With the change of government and withdrawal of funds it was up to the organisations involved to determine its future, as it had no power with the removal of the promise of regional development funding allocations to implement the projects and no access to funding for its operations. A small number of REDOs continued to operate in Australia but without government support or recognition. The REDO in the Northern Metropolitan Region had a significant role in the development of the industry network.

The Industry Network

NIETL to NORTH Link/NIETL

At the time of its establishment, the chair of NIETL came from industry and the deputy chair from education. Approximately sixty to eighty participants from industry, business, education, local and state government attended the meetings. These were held bimonthly, at industry sites usually featuring a tour and discussion of the industry and then broader issues and opportunities from which working groups formed. The working groups focused on development of industry seminars, needs analysis for Industry in the region and on training needs for individual organisations.

Some of the key outcomes from NIETL at this time were

- a directory of services for industry in the region

- a needs analysis for Stainless Steel manufacturers in the region

- a quarterly newsletter

- a model of a needs-analysis and training program for a company based on an exercise conducted at one company with the TAFE College

- a project identifying pathways and articulation from schools and across institutions.

Within a year of its establishment the network adopted a more formal management structure. The Board of Management was introduced with a subscription cost for board members. The aim was to make the organisation more secure, to be less dependent on volunteers and to put less pressure on industry members.

The significant change to NIETL occurred in 1997 when it was combined with NORTH Link, the REDO. This brought the local government members and other infrastructure and industry sectors into the organisation. It was established as a partnership because the REDO was an incorporated association and initially continued to act separately from NIETL. It was not welcomed at the time and original participants who were interviewed described this merger as a tense period and explained the tension around the event being due to the different priorities. NORTH Link had an economic development focus but one focused on promoting the region, attracting business and lobbying for infrastructure. NIETL focused on supporting industry/enterprise learning and working with partners to link schools and other organisations into industry projects for regional development.

There were funds and assets in the Northern REDO as well as influential community members on the board and a group in NIETL and in NORTH Link who did not want to lose a separate organisation. At this time the regional development focus at the Commonwealth level moved from REDOs to the ACCs. There was speculation that this was the result of a move of power and influence at the federal level but possibly also indicative that none of the REDOs seemed to be functioning well. In the northern region there were tensions around membership as well as around the roles of the three organisations in the region which clearly overlapped. The decision to continue NORTH Link was made by getting agreement across the boards of both NORTH Link and NIETL, and with the NACC. It was a compromise position that established the two organisations as a partnership.

NORTH Link was initially treated as a separate board and organisation to meet obligations that were still in place from the funding period for the REDO, to keep NACC funds to NIETL separate and because the concept of merging was not embraced by all the members of the two boards. Over time the two have merged. As the political significance of the REDO diminished so did the tension, and changes to membership mean it is no longer part of the experience of current members. Now both logos remain on letterhead, website and documents, but there is a single board and all activities come under the name NORTH Link/NIETL. Different organisations, however, will emphasise the name which is most congruent with their work. For example, local government and infrastructure representatives will generally shorten the name to NORTH Link and education and industry will refer to NIETL.

The amalgamation was the catalyst for the apparent convergence of the separate projects of industry and education, and the regional development effort. An examination of the history suggests that the NACC and the Northeast OLMA network were working across these separate projects with a regional development focus prior to the amalgamation with NORTH Link. The widespread acceptance that it was the amalgamation of the two that brought about the focus supports the theory that in overcoming the disagreements over the amalgamation the organisations have written their 'folklore' or story of trust (Sabel 1995). The story now suggests that the amalgamation brought about an approach based on collaboration and co-operation as opposed to the possible outcome as cited in stories of other regions, where a competitive paradigm emerged. It is also described as a critical turning point in the region's history (Scott 1995).

The combining of the two organisations means the NORTH Link/NIETL board is dominated by local government and education representatives. Industry representation is highly valued but difficult to keep at board level, and although this is discussed as an issue it has so far not undermined the focus on the industry network or the perception at the Board level that this focus is a critical concern of the organisation. It may also be 'an excuse which is used to avoid more confrontational issues which would ask the competitive players, the education institutions and the local governments, to work more closely' (interviewee).

NORTH Link/NIETL Case study

Interviews for the development of this case study this study were conducted over the period of late 2004 to 2006. Over this period, NORTH Link/ NIETL has had a board of management with the chair from the airport, a deputy chair from local government and two representatives

from manufacturing, four from the education Institutions, four from local government, two from the NACC and two from industry. There were over 2,000 companies in the membership database and regular events were attended by between eighty and 160 participants.

The education institutions and local government members of the NORTH Link/ NIETL board paid an annual grant to be members of the organisation. Management fees on projects also provided income and there was considerable in-kind support from the board members as well as industry members in hosting/sponsoring breakfasts, meetings, seminars and industry tours, in administration and resources to support projects and operation. For example the offices were located at one education institution and rent paid covering overheads but salaries and insurances were done through the administrative systems of another institution. Members also contributed time and skills in administration, organisation and participation in working groups and projects.

There was an executive director and an administration officer funded by NORTH Link/NIETL and two staff funded through the Australian government Tradestart Export program. There was also an ongoing part time consultancy arrangement with a public relations/journalist. Other activities depended on other project funds and priorities.

The strategic plan for NORTH Link /NIETL 2004-07 aimed to establish the Northern Metropolitan Region of Melbourne as the pre-eminent and most progressive business region in Australia delivering

- economic development
- employment growth
- enterprise development
- innovation and learning
- environmental sustainability
- social equity and quality of life ion the region (Strategic Plan 2004-2007).

The network activities and projects over this period included

- a bi-monthly program of industry tours and breakfasts. The aim of these activities was networking, information exchange and dissemination of results and learning from projects. They were sponsored by member organisations and government programs and brought between eighty and 160 members of the network together at each meeting.

- programs presenting opportunities for business—one through exhibits of items which were imported which companies could be in the position to supply and the other where there were presentations about large infrastructure projects with information about tendering for business and contracts.

- *Melbourne's North—the Best for Business.* This was a promotional campaign which had operated for three years with matching funds from stakeholders and government. The first year produced a web page and glossy newsletter promoting the region to business and industry. The second year of the program largely focused on promoting *Growing Melbourne's North* with a reduced number of newsletters still promoting to business and government. In 2005 it was a program of advocacy for the region —identifying peak bodies and government priorities and establishing strategic positioning and approaches to address the issues highlighted in *Growing Melbourne's North.*

- advocacy: the writing of a submission to the Productivity Commission regarding tariff changes and the development of a proposal and support for a campaign to bring the Wholesale market to the region were examples of this type of activity as undertaken by NORTH Link /NIETL in partnership with other stakeholders, especially the NACC.

- enterprise development programs: Tradestart and a Business Excellence program were examples of government programs auspiced and run by the network to support the development of enterprises in the region.

- industry project or working groups such as the Stainless group or Business Improvement.

- brokering projects, which involved university and TAFE students with industry as well as projects with local government or schools.

Experiences of NORTH Link/ NIETL

The use of Wenger's communities of practice, in addition to focusing the interviewees on learning as a subject, also revealed three experiences of the network. The first was that of network members who joined projects. Project teams were made up of industry participants who had self-selected to join a project to focus on an issue of relevance to their enterprise. There were a number of these and four or five were identified that exhibited characteristics of communities of practice. The second was the experience of the network member who attended breakfasts and received news and information through the network. The third was that of the board members. The board did not exhibit characteristics of a community of practice but having focused on the question it became clear that learning was also identified

as an important part of their experience.

This exploration of the different experiences of the network and the discussion of characteristics of a community of practice led to the identification of an informal community of practice providing leadership and facilitation of the regional development project. This group involved individuals from the regional development agencies both NORTH Link/NIETL and the NACC but also from past organisations, the education institutions and from projects and other networks.

Board Members Experience

The board of NORTH Link/NIETL met bi-monthly, with email communication between meetings and probably half the members meeting in other forums between, and at NORTH Link/ NIETL working group meetings, events or activities. Board members had a 'mutual engagement' through the regular meetings of the board but perhaps more importantly, through other forums where they participated in working groups or projects. They shared the privileged position of being on the Board and a focus around keeping the network going. This was loosely a 'joint enterprise'. Many of the individuals and their organisations had contributed over a long period of time and wanted to see this activity continue. Individuals identified opportunities and benefits for themselves and their organisations. There was an acknowledged need to balance interests and benefits within the network activity as there were competing interests, and a majority were paying members.

There was a reasonable sense of camaraderie amongst this group especially amongst members whose work was more directly aligned or who were working in other forums together and there were increasing opportunities for this crossover through developments within the *Growing Melbourne's North* commitment (introduced in Chapter 3). These other forums and the occasional working group of the board provided some opportunity for a 'shared enterprise': but this had not formed a coherent group which might be described as a community of practice. Two interviewees described the Board meetings as closed and agenda driven and suggested that new ideas and projects were generated outside the meetings. Other interviewees agreed that ideas were developed outside of the meetings. They felt that strategic planning sessions were very straightforward because of the consensus about the role and direction of the network and therefore ideas come through members to the executive officer because there was a planning framework. It was agreed that more could be made of the expertise of the Board members if this was encouraged in meetings. Another comment, however, was that it could be difficult to manage representatives from such different organisations especially when the network depends on

their ongoing financial commitment.

Being involved in the Board had important implications for the work and the identity of the majority of the members. In Wenger's terms there was probably a greater emphasis on reification in this group: the negotiation of meaning was largely driven by what was 'provided' in reports and papers to the board members by the executive. The framing of the network's activities within the *Growing Melbourne's North* agenda gave a focus for mutual engagement and supported the participation in this community, which was informed by and also informed the work of members in other groups, and supported this project and in their organisations and their own workplans. The *Growing Melbourne's North* document has perhaps elicited greater participation both by presenting a wider scope for engagement and stimulating discussion of strategies to address the very complex benchmarks/objectives set by project. There was some evidence of more shared understandings and new concepts entering the discussion.

Belonging to the Board provided some privilege in the network associated with being on the Board as well as status. This may have been enough 'engagement' for some members who were there to represent their organisation on the board, gain valuable information and contacts, and make comment as required. For some, membership provided legitimacy and weight to their work in this area and the involvement of their organisations. All the board members spoken to, appreciated their position on the board, felt it contributed positively to their work and felt they were learning a great deal. This was also an important aspect in the survival of the network as it depends on actual income and other resources from members.

The Board members shared some stories and have come to agreement about changes in programs which suggested learning through developing common understandings. The changes to the project *Melbourne's North—Best for Business* were evidence of this. This project started as a glossy promotional campaign to attract business to the region and moved to a program to promote the *Growing Melbourne's North* project and garner support for the regional economic development project in the region. It suggested learning within this group but also changed the understanding of the learning processes and pointed to the work of the community of practice. One board member said 'in the Best for Business project we went from the idea that we were selling the region to understanding we were bringing people along with us – on a journey to bring about change' (interviewee).

On the surface NORTH Link/NIETL and the NACC were operating from very different positions underpinned by different philosophies. Both were using a model based on research

and collaboration but the NACC was tackling the issues from a base of understanding the region and NORTH Link/NIETL were running projects for industry and motivated by attracting funds, new business and investment. This, however, was called into question by the suggestion from NORTH Link/NIETL that the second phase of *Melbourne's North Best for Business* could promote and disseminate the *Growing Melbourne's North* report. NORTH Link/NIETL determined it was important to garner support and this meant they were taking ownership of a report which was far removed from the glossy advertising of the region and provided data which highlighted serious issues which would not be attractive in the way the *Best for Business* campaign had presented the region. Through this project NORTH Link/NIETL demonstrated an ownership of shared leadership in the regional economic development project which was new and had an impact on how NORTH Link/NIETL were positioning their activity. The thinking that led to these changes was found in the community of practice, which plays a role in both agencies and has influenced how they work together and engage stakeholders.

There was 'alignment' in the Board through this regional development vision. The introduction of the *Growing Melbourne's North* document provided an important development as it co-ordinate s perspectives and actions in order to direct energies to a common purpose' (Wenger 1998, p. 186). This could indicate change is emerging in how the Board operates. The shared history is partly the knowing of others' experiences, activities and organisations. Engagement occurs in other communities and activities where the work and projects of the board members is aligned with the NORTH Link/ NIETL agenda and is developed in new ways with new collaborations. One interviewee suggested that the focus of the network remains on the 'real members' and that the Board provided 'a framework and a forum to develop understanding of the very different stakeholders involved'. The board group has not shared the intense experience of engagement described in the communities of practice framework but has worked together and supported initiatives.

Project Team's Experience

The project teams and issue-based groups differed in their experiences but were identified by members who have participated and by interviewees as groups where learning has been the most transformative and where individuals have worked together. It was in this area that many members highlighted the Whittlesea Youth Commitment and the Campaign to bring the wholesale market to the north as examples of learning in the region. These are discussed in the next chapter in this study. The working groups or projects from the industry network that were highlighted include

- the QS9000 group in 1999 which focused on automotive quality standards for suppliers when they were first introduced, and was based on the success a similar group which was formed to support companies with the introduction of the ISO 14000 standards

- the projects supporting small to medium enterprises in innovation which have been ongoing but as an example a benchmarking project in 2004 was highlighted

- a project in the Stainless industry which was one of the first NIETL projects and has continued for over fifteen years, albeit in a different form.

The Stainless group was formed in 1999 to address skills shortages in the stainless steel industry in the region. Through this group a new program in engineering at the TAFE College was developed and established where companies provided materials and access to machinery and the College took some of the responsibility for recruitment of trainees into the enterprises. It developed linkages to schools and provided input into career expos and events. It has also been a key stakeholder in the development of technical expertise for the region based in one high school and has provided equipment, materials and expertise to the school. It started as a working group of volunteers and has grown into an ongoing concern supported by a project officer funded through another organisation. There were initially four large companies and a number of small to medium enterprises involved. In one interview this group was described as

> having grown from a group of self interested companies who finally had to acknowledge each other because they had to admit they were driving up the costs of their businesses through the poaching of scarce staff from each other, to a group with a shared sense of responsibility for the success of their industry and its vital role in providing opportunities for young people and prosperity in the region.

The QS 9000 group who supported each other in activities to meet the new automotive standards, published their work in a book called *QS-9000 A Practical Self-Help Guide*; *Experiences of Australian Companies* in 1999. This group was made up of approximately 120 companies which formed the NIETL Automotive Best Practice Network. They met in groups regularly over a period of eighteen months to share their experiences and discuss issues related to acquiring certification for the standard to supply the major automotive companies. There was a network organising team of seven industry participants and the book was written based on the structure of the workshops, providing information on parts of the standard, experiences of companies, the auditor's view and then issues as discussed in

the workshops. They hired writers and the book was typed by the administrative assistant at NIETL, printed by the TAFE College, published by NIETL and financed by contributions from seventeen of the companies involved. Feedback was overwhelmingly positive with definite and positive assessment of learning about the standards and implementing quality systems but also about management and planning. One member said 'the experience was not what I expected, I was surprised at how professional our outcomes were and proud of the changes I made in my company because of it, but also proud of how my experience contributed' (interviewee).

In this group, 'export' figured largely in the conversation and seemed initially to be equated with innovation. With further questioning, however, innovation came after export, and it was the development of company management which assisted in export success. It was the experiences with the suppliers or customers in the new overseas markets which led to innovation. In some cases this was quite dramatic, with a change from manufacturing to services with a move towards manufacturing offshore. There was also a strong identification with the group and a sense of trust and shared experience amongst the core participants.

The groups which suggested characteristics of communities of practice differed from some of the other groups because they would identify themselves as part of the group and they have had a 'joint enterprise'. They volunteer to participate and join to 'develop their capabilities and exchange knowledge' (Wenger and Snyder 2000). The communities of practice framework highlighted how these members came to share the process of learning and how 'participation and reification came to be interwoven'. They developed a repertoire that combines participative and reificative aspects as they brought their experiences together, developed solutions and together produced a guide for the Automotive group, for example, or the program in the Stainless group which was significant for their community of practice. However, they also took what they had learned back into their enterprises as this was the motivating factor for their participation.

When the funded component of a project had been completed some groups negotiated for minimal secretarial support from the NACC to continue meeting, some pursued further support as individuals through the network by joining the export program for example, and some said they stay connected to NORTH Link/ NIETL and keep abreast of other opportunities to join in other projects. Participants also suggested that they identify networks as important to their operations and that NORTH Link/NIETL is only one of their networks.

Network Members Experience

The membership of NORTH Link /NIETL received a quarterly newsletter and invitations to

industry breakfasts, seminars and tours on a monthly basis. The value of the events differed for individual members and the same would have to be said of the programs and projects made available through the network. This would be described by Wenger and Snyder as an informal network with little risk or investment for the participants (2000). Breakfasts and industry tours were well attended, depending on the topic and capacity of the venue, between eighty and 160 participants was usual. Breakfasts were free because members sponsored them. Industry tours have been free to participants and the onus of organisation has been largely with the company with support from the NORTH Link/NIETL executive. This was expected to change as NORTH Link/NIETL had partnered with a state government program which would change the model, provide more of the organisation and support for the activities but expand the program and impose a charge.

Interviews and feedback indicated the network was valued as an information source with a reputation amongst the industry for reliable and current information. Equally it was seen within government as involving industry and being representative of issues and views within the region. However, identification as a member of the network was rare unless the individual had been involved in a project. Identification with the Northern Metropolitan Regional focus varied considerably and was based more on the individual's background. The regional affiliation was more likely to be connected to the operation of a family business with family history in the region unless the individual had been engaged in some of the projects working with disadvantaged young people. Individuals who had seen the difference the network has made to these young people were also likely to identify with the regional basis of the network.

Success of the Industry Network

NORTH Link/NIETL

There was agreement that success was measured by outcomes for industry and enterprise development in the region and then by other regional development initiatives. There was a feeling that the network achieved its objectives and no interviewee questioned its success. Most also pointed out that part of its success was due to its business management and to keeping 'an eye on ensuring there's something in it for people who participate'. If there was a concern it was about needing to reach a larger number of industries and having the capacity to do so. There was a strategic plan and that represented formal criterion for measuring the outcomes, and there was generally agreement that the network was successful against these criteria; whether it would make the Northern Metropolitan Region the 'pre-eminent and most progressive business region in Australia' was certainly considered debatable.

A number of key people were pointed to as important in the ongoing work of the networks described as 'good people with enough self interest to sustain involvement and enough of an altruistic streak to work for the greater good' have made this network work. When considering how you might replicate the network in another area a number of interviewees suggested you would have to get to know the people first so you could find the right people and that this was also critical for the future of the network. Also highlighted were the networking activities between industry, education, government and other organisations. The other critical factor mentioned consistently was the constant support for the industry/enterprise outcomes by supporting management improvement and export programs. There was a positive response to learning in the network and learning was identified as something that contributed to the organisations involved.

Leadership

Leadership was seen as something distributed across the project with good operators in the network. There was consensus that the regional economic development project culminating in *Growing Melbourne's North* grew from people coming together around the resources of the networks, supported by both the NACC and NORTH Link/NIETL. A number of key people had formed a community of practice which supported a range of activities and projects, included members who were not prominent in the networks but had leadership roles in their areas of expertise and shared ownership of the 'joint enterprise'. This community of practice operated both informally and through the working groups and meetings of the agencies. Amongst the members there was a strongly shared view that better prospects for the region, good employment opportunities and support for the local industry were critical and that the resources in the agencies and the ability to support the network events and projects were 'the glue that held the network together'.

There were a number of people interviewed who suggested NORTH Link/NIETL serves an important function for the wider network and the regional economic development project. They suggested that the NACC and the local governments could not do this on their own because it was the industry network which was important, supporting Moss Kanter's finding that it is 'business, and not duly elected governments that confers legitimacy on civic agendas' (2000, p. 169). Related to this and felt strongly by network members was that the involvement of business and industry members secures attention from government and politicians.

Individuals

The success of the network was seen to yield benefits for individuals described as

- professional development
- information and understanding of issues outside direct experience which help inform work and strategic planning
- understanding of different organisations and useful contacts and networks across industry, education and government
- access to potential employees and partners
- knowing who to contact
- opportunities for collaboration and new projects and ways of operating
- exposure.

Individuals from infrastructure organisations and education institutions rated highly learning about other organisations and making new contacts. They valued this learning, which supported more strategic approaches and ways to partner with other organisations. Learning for the enterprise members was much more about changes in the individual's practices plus information about programs, government initiatives and other activities which supported their enterprise. For some the project or community of practice experience, provided learning which changed the way they worked and had real outcomes for themselves and their company.

Sharing experience and issues was mentioned as important across groups and the fact that individuals from different organisations with different perspectives and experience greatly enriched the discussion and outcomes.

Organisations

The success of the network provided benefits to organisations which included

- information and understanding of issues for the region and in the wider context, relevant to organisations
- access to resources through partnership and collaboration with other organisations
- participation in projects and programs which would not be available without the network
- exposure new contacts, to potential employees and to new ways of working

- links to government, industry and education

- profile and exposure for organisations

- opportunity to meet/get to know potential suppliers, consultants and employees through activities in the network

- innovation, new processes and products

- new work practices

- enterprise success

- opportunity to be part of something new which comes out of the network ie. something that wouldn't exist without the network.

Interviewees did separate benefits and learning for themselves from their organisation's. This was in part led by the questions which asked for consideration of organisational learning. It was, however, also suggested that a reason for the success of the network was the understanding that 'individuals needed to get something out of their participation for them to put the energy into ensuring their organisation did.' The profile of the NORTH Link /NIETL was also seen as important as it attracted participants and in some cases helped them to involve their organisations.

The Model

Finally, the model used in projects and programs is something that was recognised and widely admired. It is described as 'research, collaboration and partnership' although in some cases collaboration was considered enough to 'get the job done'. The model involves a good understanding of the issues and context for a project, plus local knowledge. This included government policy, general statistics and international information presented with specific local information to ensure it was clear how the local effort should be focussed. This also suggested which organisations needed to be involved in the development of a project or program. When the people from the organisations were brought together the discussion determined the next steps. In some cases increased local knowledge might have been the outcome or a response to a tender. For more challenging issues this might have involved the development of possible responses and then the effort to determine what resources would be necessary and how they might be garnered. Collaboration was defined as working together—for example to achieve funds through a tendering process but a partnership required greater investment from different organisations working together. Straightforward projects were described, such as the QS9000 group which had powerful outcomes but was easily identified as an issue with local implications and easily identified participants. The Whittlesea Youth Commitment and the campaign to bring the wholesale market to the north

were consistently highlighted as examples of how the projects in the network were developed. They were highlighted as iconic and as examples of learning.

Learning and Knowledge

The Industry Network

A key indicator of learning is the ability to change and adapt. Changes in the organisation of the network support the theory that learning has taken place over time and the network has not been 'path dependent'. This network has been in operation since 1989 and as discussed, there have been changes in its structure and operation with ongoing support for enterprise development, a core element as the regional development agenda has emerged.

There are routines and patterns of operation in both the NACC and NORTH Link/NIETL in this study which could result in the inability to change or adapt to new circumstances. However, the history gathered in this study has suggested an adaptive network attuned to, and able to take up, opportunities and changes in government policy. There are a number of examples:

- The move from a focus on training and industry-education partnership which was central when the industry network and the schools group NIECAP were established, to a much more holistic approach to enterprise development while maintaining the education and industry focus

- Success with government initiatives resulting in the establishment of the agencies which, over time, have led the economic development project; NIETL and the schools-based programme initially, the North East OLMA network, the Northern ACC and the Northern REDO and the longevity of NORTH Link/NIETL and the NACC

- The numerous projects and programs which have received government funds

- Interviewee responses supported the argument that the network was adaptive through its appreciation of learning as an aim of the network and the continual work on new projects and initiatives, and bringing in new participants. Signs of path dependency or the inability to change, would include complacency or protectiveness with current arrangements and membership, and this has not been evident.

A point raised a number of times in interviews was the change in the way activities were managed. The network had moved away from voluntary working groups coming together to

complete a task or to try to solve an issue to more funded projects contracted to NORTH Link/NIETL. This has been driven in two ways: firstly by the need for the network to sustain itself so in bringing in project funds it collects some income and the resources to provide additional services; and also by the increasing pressures on the members who no longer have the flexibility or time available to participate unless the project directly benefits them or their organisation and is consistent with their work tasks. It was also raised that the working preferences and style of the executive officer had influenced this and that this way of working had 'supported good linkages to the government departments and becomes a positive reinforcing cycle' (interviewee).

The history of the region has been influential in the way this project has developed and a number of elements emerge as significant in the ways the network has dealt with change. The collaboration between industry and education and the ability of the university to support the facilities of learning or the soft infrastructure has influenced the direction. The importance and the decline of manufacturing and the level of disadvantage in the region have been key determinants, while regional development and education policies and programs have been significant.

It may be that circumstances at the time of this study could test the adaptability of the network: the change in the chair of the network, from industry to an infrastructure representative; changes to the NACC which could be quite dramatic; changes to education both TAFE and University provision, and more positively, the opportunity presented in the *Growing Melbourne's North* project have all been identified by participants as potentially important in the future of the network. Participants argued that the continued emphasis on learning would support the ability to deal with change and the future of the network.
The following lists the most common evidence of learning which was identified as being critical to success:

- enterprises reaching export targets
- enterprises developing new processes or products
- student projects with enterprises resulting in transformative learning experiences and real business outcomes for the enterprise
- leaders from industry and other sectors working together to address issues of disadvantage, particularly with young people
- repeat funding or self sustaining projects
- winning of funds for projects

- numbers of participants at breakfasts, tours seminars etc
- fully subscribed projects
- individual learning through involvement in projects.

In discussing network learning the strongest message from the interviewees was the value placed on the cross-sectoral linkages. By bringing industry into the projects with disadvantaged youth, by supporting industry projects with local government or by bringing research expertise into projects, the network supported learning which was not otherwise possible. Interviewees identified the leadership as broader than the industry network; they value the connections across the region and in different organisations. One interviewee summed this up as 'You'd expect an industry network to be exclusive like a cluster, maybe divided by sector like food or stainless steel, but you see here that industry is part of the region and we are stronger because we can work together (with education or government) on problems which belong to all of us'. Another said 'you get unpredictable and unexpected outcomes because people with different perspectives are contributing – it is really about learning'.

Learning is considered a significant contributor to good outcomes for the organisations and the region, and interviewees were very comfortable discussing learning. Repeat funding and self sustaining projects were highlighted because they demonstrated that people had learnt to work together and valued the outcomes. The Whittlesea Youth Commitment Project and the Campaign to bring the wholesale market to the region were highlighted by all but one interviewee. These were also seen as examples of how individuals and organisations in the region were getting much better at collaborating and advocating for better resources and more attention for the north. The *Growing Melbourne's North* document was also seen as evidence of the network learning having developed from the original profile of the region into something which examined the region and set a vision and measures for progress.

Learning from the different experiences of the network

The conversation from the board level was focused on outcomes as evidence of learning. Board members also spoke of their own professional development and learning supporting their work and career. Exposure in the region, within the different sectors, but especially in industry, and in government circles was also seen part of this experience. The comments on a learning perspective were about developing an understanding of how other 'sectors' in the region think; that the way local government, education and industry work are very different and being part of this group supports wider collaboration and understanding. This also helps in developing projects and winning funding for an individual's organisations because they

have access to the other organisations and understand what might be appealing to them. The board was largely a group of individuals committed to the project, sharing expertise but largely internalising their learning.

Conversation amongst the ongoing project or issue based groups generated insights into taking responsibility, seeing a bigger picture and sharing experience and learning from others experience and from 'taking two steps back from my own.' These participants talked particularly about changes in their practice through the project and developing more reflective practices through the experience. They also described high levels of trust in their group and how much they learnt from other participants. In these conversations innovation was discussed as the outcome from their learning. These comments suggest that there is a belief amongst this group that better management and changes in management practices in their companies was the first step. Export was the next step as it has become such a priority and necessity in the industry sector and in regional economic development in general. The 'pull' for changes, new opportunities, products and ideas came from outside the region. Initially, it seemed that in the industry network many individuals equated innovation with export, but with further questioning it became clear it is the connection to international markets and opportunities that provides the impetus; export is a necessary goal but does not necessarily represent innovation. All individuals who could identify innovation in their enterprises highlighted 'international connections and tenacity' as key ingredients.

The 'learning' discussed by members of the wider network who had not been in projects or working groups was described as 'learning about new programs' or 'learning about what some one else is doing'. Within the wider network knowledge was treated as information. It is knowledge which is shared or diffused. The network has not learned to develop a more collective understanding from the experience of the projects, although there is value placed on the learning and sharing of examples that occurs.

Learning Organisations

Discussing learning organisations was much more difficult but was important in the context of innovation. Answers tended to focus on changes in organisations through programs or projects as previously discussed. In education and local government there was a sense of going backward; that the learning was with the individuals involved and the organisations were almost 'delegating' the work and learning to the participant and not taking it in unless other members of the organisation were brokered into projects. This was from current members and they felt that it had been different at the beginning of the network, which seemed to be supported by interviews with individuals who had been members for a long time or were members at the formation of the network. They clearly felt part of a very critical

and instrumental project for the region and their organisations.

Individuals from a small number of enterprises discussed organisational learning. They identified changes in management, 'understanding the stakes, the risks and the actions' and 'new ways of working' as organisational learning. They generally felt they took something back into their organization, which enabled them to bring people together differently, maybe because they had new knowledge, a bigger picture and were able to see something in their companies discussion that they hadn't seen before. It was admitted also that sometimes this had as much to do with being better organised, having better data on the performance of the company and other better management tools in place so they actually knew what they were dealing with when previously they had just been 'getting away with luck and maybe not listening.'

The learning described is consistent with the types of learning ascribed to that in innovation systems. The notion that 'new knowledge' brought into the organisation and shared suggests a 'learning organisation' experience. The small number who identified innovation through their learning described a need or an urgent problem brought about by challenges of working with overseas suppliers or markets. They described improving their companies through their own learning as the first step and perhaps learning as an organisation was possible because more staff knew about how the business was working when they needed to pull together to solve a problem. This was a small sample but it is consistent with the studies of innovation in low to medium technology industries as discussed earlier in this chapter (Bender 2006).

The other learning discussed by interviewees suggests that through learning they had moved on from the narrow workplace training approaches and the belief that it was training that would improve their performance. For some this meant more management focused initiatives. For participants in the project groups which had been very successful, and exhibited characteristics of communities of practice such as the Stainless group or the leadership group, interviewees made specific reference to the regional development vision and the sense of growing responsibility for the development of the industry and opportunities for young people. A significant thread in these discussions was the interaction with young people and particularly to young people at risk who have had life changing experiences through their exposure to industry.

Learning From the Network

The other very important learning from the network was that taken from the NORTH Link/NIETL activities and practices which translated into changes or new initiatives in

government policy. An example at national level was the NORTH Link/NIETL export development program informing changes to the Tradestart program at the federal level and at State level in the newly introduced program of industry tours. Similarly, a program which engages Manufacturing Engineering students in companies to assist in the reduction of greenhouse emissions was to be replicated nationally.

There was a suggestion that this might also have 'taught' NORTH Link/NIETL, that it was in a position to influence, and gave the Board confidence in approaching the members of Parliament in a more formal and public manner.

Communities of Practice Conceptual Framework

The communities of practice framework helped people to talk about learning and helped identify different learning experiences in the network and a way of seeing the ongoing work. I had thought, for example, that organisations took the responsibility for carrying on the work through some succession planning. The identification of a community of practice explains this much more effectively. The network depends on people across organisations and this is where the strength lies, as it reduces the dependence on organisational commitment or spreads the commitment. It also means that people move into other organisations and continue their participation.

Power and identity are also observable using this framework. There are leaders in the region who hold core positions in the community of practice, but there are also leaders who are peripheral in the community of practice. This is not about learning enabling a move from the periphery to the core, but rather about sharing and practice. These leaders participate in the community of practice at the periphery but are leaders of projects which are part of the regional development project back in their field or organisation. They bring new perspectives and may seek support or resources but they do not necessarily seek to become more central or influential in the community of practice.

Power is relevant in this discussion. Wenger acknowledges that communities of practice may not be positive and that power will be a variable. Power is held by leaders in the community of practice by virtue of their knowledge, their positions and organisations. There was an interesting selection process at work in the Northern Region. Although people self-selected and volunteered to participate in activities there was also an effort made by participants to draw in new participants they felt should be engaged in the regional development project. It was difficult for the network to be overtly exclusive as most meetings were open to organisations although some targeted particular positions, such as the Economic

Development Directors of the local councils, and a considerable amount of the practice took place across the range of forums and meetings.

Finally, the aspect of communities of practice which was also a consideration in discussion of the learning region was the potential for the community of practice to 'prevent us from responding to new situations or from moving on' (Wenger 1998, p. 85). The 'joint enterprise' of regional development does not guarantee that the community of practice will be expert, flexible and have the capacity to lead in the new direction rather than get 'stuck' in a historical pattern of behaviour and thinking. As discussed, the history of the region supported the view that there has been the ability to change and adapt in the region. The existence of a community of practice which supports a distributed leadership could be a way of understanding this but requires further exploration. This is discussed in this chapter under the heading 'learning region' and explored further in Chapter 5.

Innovation in the Region

Was the Northern Metropolitan Region of Melbourne comparable to the types of regions described in the literature? Does it have characteristics of an innovation system or milieu? At this time this was a region with considerable decline in manufacturing and many enterprises described as low to medium technology. There were critical skill shortages across the technical and apprentice arenas as well as concern about developing a stronger business services and research support for industry.

Innovation does occur in enterprises and is diffused by the network. In this study local and global drivers for innovation were identified. One interviewee expressed this as 'local support helped our management and put the company into shape but the idea came from the new partner overseas.' There were also high levels of trust amongst some areas of the network and a 'folklore' which talked about collaboration developing form the amalgamation of agencies and supporting learning in this region (Sabel, 1992, p. 224). These are conditions which are recognised in the body of work for innovation.

However, there were few multinational or global company headquarters and little evidence that the region 'had productive meaning' in terms of global networks (Castells 1991). There may be evidence in the automotive, aerospace and furniture industries of connections to global networks, but it was not positioning of the region. Finally there was some learning identified at organisational and network/region level. However, there was no comparison to the 'paradigmatic' innovation systems or clusters identified by Porter (1995) or Florida (2005). There was support for the findings in the European and American work on medium to low technology enterprises that innovation comes from an external, international pull, and

generally after improvements in management (Bender 2006, Rosenfeld 2006). This would also require further exploration given the small sample in this study.

Learning Region

Generally people in interviews struggled with the concept of the learning region. A fairly typical response was the questioned possibilities because these 'local' regional agencies have no power or influence over the 'things that matter' (interviewee). Policies, infrastructure, funding, incentives are all outside of the activities. If you can't change the settings and learn from the experience how can you learn at that level? The best there is at this level is the hope of 'influence and advocacy or moving people at the grassroots' but even then most decisions are ultimately political and that's one thing we have learnt well. [The Northern Metropolitan Region has always been a 'safe Labor seat', which as this individual is suggesting, means that there is little incentive for either side of politics to worry about the region].

However, there were also more positive responses to the idea of a learning region. Learning was attributed to the complementary and close work of the NACC and NORTH Link /NIETL and their attention to other groups and organisations in the region. The ongoing commitment to the industry and enterprise activities is seen as a positive outcome and indicative of learning as it supported the 'engine' of the region. The research and documentation of *Growing Melbourne's North* is also seen as a learning outcome. For regional learning to take place this information had to be gathered in the first place and then shared, and had to be convincing to people who were not already in the networks. It was felt that the development of a document for that purpose showed learning in the network supporting regional learning.

The other reason given for identifying learning in the region was the network of individuals who work in different areas but take with them the history and understanding of the work in the region and share it more widely by their involvement in the network, especially through participation in and contribution to particular programs and activities. These individuals were mentioned quite consistently and over the course of the study identified as a community of practice, which included people from the industry network but also beyond. Some of theses individuals participated in interviews and there was, recognisably, a 'shared repertoire' (Wenger 2000, p. 82). They described activity in very similar ways, and a number of terms were common such as 'action research,' 'respect and honesty' 'pre plan, clear directions and protocols' and 'enlightened self interest' explained as someone who 'is altruistic enough to work for the benefit of the region but is also getting enough back to justify the effort and keep them interested'. Wenger suggests a shared repertoire 'reflects a shared history and remains

inherently ambiguous' and it is this that gives the possibility of meaning being created for the community because ambiguity is the 'condition of negotiability' (Wenger 2000, p. 83). One example of this is again the partnering of the REDO and NIETL. Some of this community were active at the time and the 'folklore' of how the combining of the two demonstrates collaboration and trust according to their story is the rewriting of a significant conflict into the outcome that was desired and by now largely achieved.

Role and Interaction with Government

NORTH Link/NIETL increased its role in advocacy over this period of time with greater success at State level, where there is a focus on business development. NORTH Link/NIETL has had input into the Manufacturing Industry Consultative Committee (MICC) report and their views were endorsed particularly with regards to tariffs. They were also able to advocate for changes to the Export Development Program where there was a cap that prohibited NORTH Link/NIETL from taking on additional companies. Indirectly, some state government initiatives such as the 2030 Strategy, the matching of boundaries across state government departments and local governments, and increasing focus on the role of local governments could provide opportunity for the regional development project at state level.

There has been little success in influencing policy at the Commonwealth level. For example in the manufacturing area NORTH Link/NIETL would support action in areas where key levers are at Commonwealth government level, and they have had no success in influencing discussion, for example in changes to the R&D tax incentive, maintenance of existing tariffs until a significant benefit can be demonstrated or until other countries particularly SE Asia commit to the same tariff rate or a national approach to attract Foreign Direct Investment which focuses on value added manufacturing (2005). There has been some influence over Commonwealth programs, with the proposed adoption of a NORTH Link/NIETL project with the greenhouse office as a national program and the changes to the Tradestart program adopted from NORTH Link/NIETL approach. However, there has been practically no connection to Commonwealth policy except through the introduction of meetings with local Members of Parliament which, at the time of writing, is proving to be constructive, particularly in the context of the election and the new government coming into power.

Support in a systemic policy/program sense is not apparent. There are programs which support the services to enterprises from Commonwealth programs in commercialisation and export assistance, and also at state level in manufacturing and business excellence. There are also programs that support one-off projects, which are generally distributed through competitive processes at both federal and state levels (see Chapter 3 and more detailed

discussion in Chapter 6). However, without a broader urban or regional development framework the levers are still largely beyond the control of the key players at the regional level, and collaboration and cooperation between levels of government is absent. At a deeper level using the concept of institutions as 'stable valued recurring patterns of behaviour' a higher value placed on learning and regions would be identified (Goodwin 1992).

Conclusion

In this study of the industry network I found that there has been learning at a number of levels and participants in the network were aware of their learning, of different types of learning and were also interested in a discussion of learning. There is strong evidence of project teams that had characteristics of a community of practice. Participants from these projects were able to articulate their learning and discuss the way they understood the process of innovation in their enterprises. Critically important to them was the development of better management, the ability the share learning and then innovation came from the needs and opportunities that arose through export experiences.

The study started with the question, 'Is there innovation and learning in the network?' This is apparent in the sample from the industry network, but the discussions about learning led consistently to the regional development project and highlighted examples which were not the focus of the industry network. A key finding in the industry case study work was that it was part of a wider project in partnership with the NACC and its network. The vision for the region was found in the work of both. This was intriguing and led to the question, 'Why there was learning' across the networks?' and 'What were the linkages across these successful projects?' The analysis has suggested that a community of practice has supported a learning project in the region. This extended the study of the industry network to the study of the Whittlesea Youth Commitment and the Campaign to bring the wholesale market to the north which formed part of a regional economic development project.

This was part of the iterative process of theory development in the study as it moved away from the discussion in the CRITICAL project, interested particularly in the support for innovation in the industry network and then back towards the work in CRITICAL developing a case study of a region and then seeking better understanding of a learning region. The following chapter focuses on the regional development project and how it supported an emerging view of a northern metropolitan learning region and the development of learning region theory.

Chapter 5

Beyond the Network

Chapter Summary

This chapter describes the activity beyond the industry network in answer to my questions: 'Why is there learning across networks' and 'What links the successful projects?' It describes the economic development project supporting learning across the region using a model based on research, collaboration and partnership supported by an 'architecture of learning' (Wenger 1998). This chapter situates the project within the relevant literature on social capital and cohesion, urban development, and global cities. Based on the findings from the case study of the industry network two projects are examined; the Whittlesea Youth Commitment and a campaign to bring the Melbourne Wholesale Market to the region.

Introduction

Through the study of the industry network it became clear that both the NACC and NORTH Link/NIETL supported the Northern Metropolitan economic development project. The work of these agencies was underpinned by widely held assumptions about learning which brought different sectors together around the same 'joint project' from different starting points.

The assumption held by industry and many local government participants was that support for manufacturing industries and technological and engineering education would assist economic development. These participants clearly thought that better options and choices for students in technical fields, better educational outcomes and training and education for employees would address their need for skilled workers and improve prospects for the region. The participants from the range of education providers were committed to the joint project but were motivated by the need to provide better access and equitable schooling opportunities to change the social structures and develop skills in the lower skilled workforce and population in order to build better prospects for the region. For both groups good employment opportunities were a key outcome. Though the discourse was slightly different, both groups were committed to improving prospects for the region. The differences were highlighted by a select group of industry participants whose experience in projects working with young people struggling to make their way had changed fundamentally how they saw their work in the regional development project. These participants spoke at length about the responsibility they now felt for improving prospects to change lives and to work together to build a better society where all young people have opportunities they had assumed were

available. Both groups identified the agencies as significant in facilitating the regional economic development project.

There were strong underlying assumptions about linking social and economic objectives in this regional economic development project, which have influenced the direction of this study. The industry network was never intended to work in isolation. It was established alongside NIECAP because the objectives were to improve employment prospects and prosperity for the people of the region. The literature which best frames this approach includes the discourse of social capital and, because of the mix of many concepts in this discourse, some consideration of social cohesion which also encapsulates the intent of this project. Social capital as it has been associated with education, and in the innovation literature is pertinent to the development of this case study. Literature on regional development and a consideration of the city in the global context also support understanding of the regional development project and are included in this chapter leading into the discussion of the learning region which is continued in Chapter 6.

Social Capital

Social capital is a concept with 'intuitive appeal' and used in many different ways. It has been defined broadly as 'social networks, the reciprocities that arise from them and the value of these for achieving mutual goals' (Baron et al. 2000, p. 1). The popularity of the concept of social capital is attributable largely to the work of Robert Putman who was concerned with deteriorating social capital in the United States and argued that communities with low levels of 'civic engagement' would be more disadvantaged than those with higher levels (Putman 2001). Woolcock (2001) suggests that there is an emerging consensus around a definition for social capital with outcomes from increased social capital generally considered to be increased trust, justice, governance, less corruption, increased democratic participation and a sense of security and ability of societies to absorb shocks (McMahon 2001, Putman 2001, Wolfe and Haveman 2001).

Putman proposed 'bridging or inclusive social capital, and bonding or exclusive social capital' as ways of distinguishing different dimensions of the concept (2001, p. 22). Neither bridging nor bonding is inherently negative or positive and both may have either social impact. Bonding social capital represents close ties within a homogenous group and this may be supportive and positive; it may also be exclusive and serve a negative social purpose or cost to the group alone. Coleman observed that 'a given form of social capital that is useful for facilitating certain actions may be harmful to others' (1990, p. 302). Bridging networks 'are better for linkages to external assets and for information diffusion' (Putman 2001, p. 22).

Granovetter (1973, 1983, 2005) studied the 'strength of weak ties' and the flows of 'unique and non-redundant information', which is more likely to transfer across weak ties to otherwise 'disconnected segments of social networks' (2005, p. 35).

The work of Putman is prominent in a 'tradition' of thinking on social capital which is the basis for much of the current policy debates and developments as is demonstrated by the research and contents of the World Bank's online resource and the social capital library (Burnheim 2004, Fine 2001). Portes suggests that the use of the term is warranted because the 'concept calls attention to real and important phenomena' but warns that it is not new but is 'presented in a more appealing conceptual garb' and does not provide a 'remedy for major social problems (Portes 1999, p. 21). Mowbray points out much of this work focuses on 'interventions at the local level—often styled as community building' and displays 'too little interest in assessing how wider state policies affect social capital' (2005, p. 47). Fine highlights his own and others' criticism of the exclusion of 'the role of the state, political parties and culture and so on' (2001, p. 91).

Coleman and Bourdieu are considered the early theorists of social capital. Coleman saw social capital development as purposeful where for Bourdieu social capital was one capital, alongside cultural and economic and these reinforced or reproduced social and economic inequalities (Bourdieu 1997, p. 54). Both Coleman and Bordieu were concerned with education and the role of the environment in determining educational outcomes, although Bourdieu was concerned with the reproduction of class relations through cultural mechanisms (Schuller et al. 2000, p. 2). There is a history of examination of the assumption that social capital and education are linked. One of the earliest was the work of Althusser (1971), who found that 'schooling serves to reproduce the social relations of production.' Arguments against this view of schooling would suggest that it is overly deterministic and assumes students are passive (Bernstein 1977, Hargreaves 1980). Coleman (1994) in a major study with the United States Office of Education demonstrated that social capital was significant in supporting student achievement. His work with Catholic schools suggested the better performance from students in the Catholic system than those from schools with the same socioeconomic indicators outside the system, was due to 'the church-and-school community, with its social networks, '…[which] constitute social capital beyond the family that aided both family and school in the education of the family's children' (Coleman 1987, p. 36). Putman also linked higher levels of education to increased social capital as he found 'human capital and social capital are clearly related, for education has a very powerful effect on trust and associational membership' (1995, p. 667).

In the innovation literature, social capital supports the innovation process and reduces inter–firm transaction costs. Through networks and the development of trust, innovation is supported through greater 'exchange of ideas' and through the strengthening of supplier relationships and solving of problems. Cooke and Wills found that SMEs 'ascribe improvements in business performance, innovation and knowledge exploitation to newly formed social capital [developed through government programs supporting networking]' (1999, p 233). Maskell found that 'without creating jobs, securing income and preventing exclusion of the less skilled, the continued accumulation of social capital is endangered together with the economic benefits that spring from it' (in Baron et al. 2000, p. 121).

The Northern Metropolitan economic development project is based firmly on these assumptions. In the commitment to supporting access to education and employment pathways and supporting innovation not only in enterprises but also in social projects which enhance social cohesion.

Social Cohesion

The project has had a strong focus on cohesiveness. It has been concerned expressly with addressing the polarisation of the society, skills of the population and building an integrated region (Shepherd 2003, p. 45). Fainstein finds that 'much of the existing literature on urban economic development and competitiveness, rather than linking cohesion to competitiveness, finds a tendency toward greater segmentation, social exclusion and inequality as a consequence of economic growth and competition' (2001, p. 884). The aim to target disadvantage and support access to education, training and pathways to employment is supported by research which found social cohesion is best served by the reduction of inequalities in education rather than increasing average attainment or levels or education (Green et al. 2003,6). Measures developed by Berger-Schmitt for the European System of Social Indicators conceptualise two dimensions of social cohesion: the reduction of disparities, inequalities and social exclusion forces; and the embracing forces, strengthening social relations, ties and commitments within a community (2002, p. 406). The endeavour to address educational disadvantage in the region is targeted at education to support good employment and pathways from school to employment. The argument for the regional economic development project is framed by these perspectives.

Working with Capital

The term, social capital, has gained such traction because it suggests a way of bringing the economic and wider social concerns together. Bowles and Gintis suggest that '… the social capital boom reflected a heightened awareness ... of real people's values, which are not the

empirically implausible utility functions of *Homo economicus*' (2000, p. 3). Capital is a term which has credibility in a society driven by accumulation and economic growth. It is something that can be accumulated and measured.

Adams posits a significant theory of 'community capital' which brings together the 'outcomes' attributed to social capital and a 'coherent theory of action (where) the relations between networks and institutional relations need to be articulated, and the way knowledge is formed and made relevant to policy' (Adams 2005, p. 3). His theory starts with the local knowledge and activity meeting 'community oriented institutions delivering through life-stage frames' (Adams 2005, p. 17). Critical in this discussion is governance and how layers of government interact. The community capital model aims to understand how the policy framework is set so the local knowledge of issues and potential solutions is linked with the expertise and resources for action across government.

Parkin (2005) argues for a change from or 'thinking about things in a disaggregated and disconnected way to thinking 'systemically or holistically'. She proposes a sustainable capitalism based on five capitals building from the work of Erkin (1992) and Serageldin of the World Bank (1994). The five capitals are

1. Financial: strictly speaking has no intrinsic value, is purely representative of natural human social or manufactured capital; reflects the productive power of the other types and enables them to be owned or traded

2. Manufactured: comprises all human fabricated 'infrastructure' that is already in existence; the tools, machines, roads, buildings in which we live and work, and so on

3. Social: all the different co-operative systems and organisational frameworks people use to live and work together, such as schools, trade unions, voluntary groups

4. Human: consists of health, knowledge, skills, motivation and spiritual ease of people; all things that enable people to feel good about themselves, each other and to participate in society and contribute productively towards its wellbeing (wealth)

5. Natural, also referred to as environmental or ecological capital: represents the stock of environmentally provided assets and falls into two categories:

   o Resources, some of which are renewable (trees vegetation, fish, water) and some non-renewable (fossil fuels, minerals). In some places ostensibly renewable resources like fertile soil have become non- renewable

o Services such as climate regulation or the powerful waste processing cycles that break down, absorb and recycle emissions and waste from all species (p. 30).

Parkins and Adams present examples of theorising the concept of capital in ways that would support action for practical solutions to vast, complex and wicked problems. There is a need for continued work in this area with better measures and approaches aligned with developing theory of the learning region.

Urban Development

The Northern Metropolitan Region is a sub-region of the city. It is primarily an urban area. The world is approaching the point where more than half the population will live in cities and the population in urban areas of developing countries will double (UNFPA 2006). The literature of economic development in the urban context is divided between the literature for the developing countries and the planning and urban affairs fields in the Anglo/European traditions. The Anglo/European urban development planning and policy has been focused generally on the areas of 'location of land uses and activities, the flows of people, goods and information between locations in the city; and the nature of the transport and communications infrastructure' (Forster, 1995). Jacobs (1984) argued that 'cities are the agents of wealth creation as ties bind the city to its (city) region' and that 'in the global context and there is competition between cities'.

Since the 1980s, there has been an overriding framing of economic development that it is an endogenous undertaking with development strategies to encourage start ups and local strengths and 'unlock the wealth of regions' (Amin 1999, Blakely 1994, Beer et al. 2003). A 'theoretical diagram' of key elements for 'organising the information' and highlighting two factors: one internal—the level of economic and social development already attained and one external—the extent of connections beyond is presented below (Hirsch 2001).

Figure 1: Determining Factors in Economic Development

DETERMINING FACTORS IN ECONOMIC DEVELOPMENT

5 KEY ELEMENTS

1. NATURAL RESOURCES	2. LABOUR (WORKFORCE AND ENTREPRENEURS)	3. CAPITAL (PHYSICAL, FINANCIAL, ETC.)

which are combined in Economic Production Units that each:

a) have a given   b) operate within a given

4. LEVEL OF TECHNOLOGY		5. INSTITUTIONAL FRAMEWORK

5-A Local
5-B Regional,
5-C National
5-D International
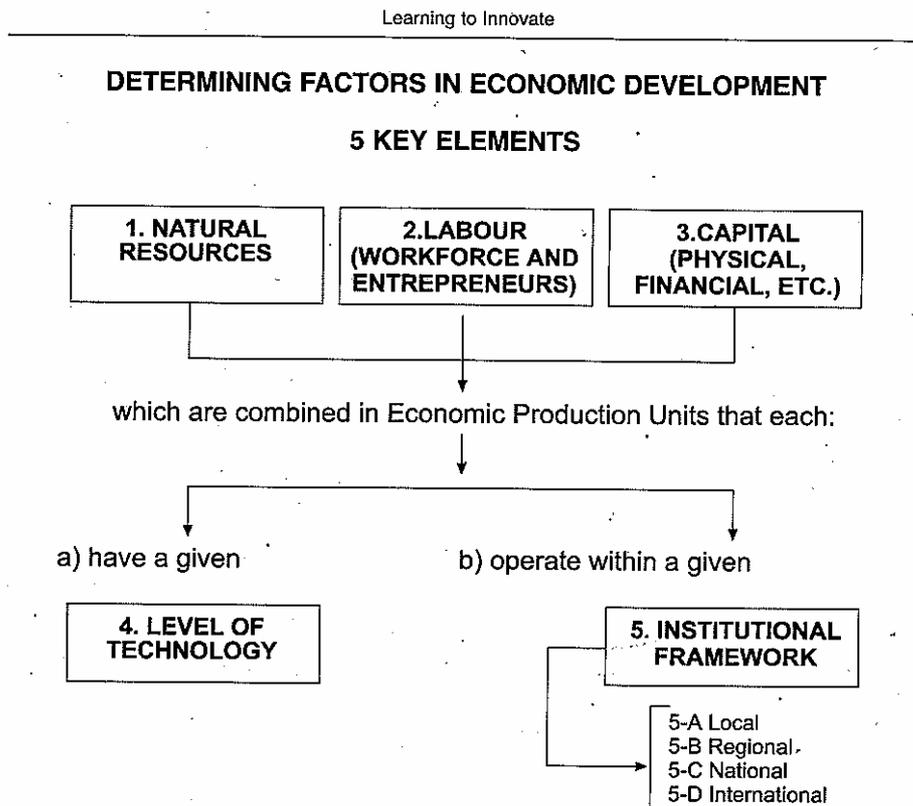
(Roman del Rio Learning to Innovate: Learning Regions 2001, p. 27)

These are the theoretical five elements in regional development.

> Instead of ruling out one factor or another … a mix of all of them (is used) in varying combinations, determining the relative importance or exact weight to give to each in light of the objective, subjective, institutional, geo-strategic and cultural characteristics of each specific economic area' (Roman del Rio 2001, p. 27).

As discussed in Chapter 4 in the global knowledge economy the institutional framework increasingly has become an element of focus. In a world of mobile capital and information, influencing or influenced by each of the five elements, competitive advantage depends on a region's capacity to generate innovation. Cities are the places where most people live, where goods and services are produced and traded and are the primary sources of advanced technology and business innovation (Troy 1995).

Recent trends in urban development see as the role of the city as increasingly central as the 'powerhouse of the global economy' (Amin, Graham 1997, p. 411). New concepts develop as cities change. The ideas of Le Corbusier which represented 'modernism' and associated

progress with slum clearance, public housing and skyscrapers, the 'informational city' and the 'space of flows' (Castells 1991) and the studies of the 'post modern city' with changing relationships between urban form, the geography of production, globalisation, social polarisation and the urban 'imaginary' underpin the policies and planning initiatives of governments. Stilwill summarises five ways of seeing the city:

1. as a locus of production activities

2. as a market for the allocation of resources

3. as a mechanism for the distribution of income and wealth

4. as a power structure

5. as an expression of social and political values (1995, p. 40).

In Australia, urban policies have generally been weak and disjointed. However, there have been two focused efforts from federal government, the Department of Urban and Regional Development in 1972 and the Better Cities program in 1991/1992. Orchard suggests these policies reflected the 'wider debate in Australia between social democracy and economic rationalism' and both aimed for 'denser urban environments' with the reforms in the 1970s assuming 'government had the capacity to undertake reform for example through public land development', and then the policies of the 1990s supporting the 'productive city' linking changes to the city to 'economic restructuring and market forces' (in Troy 1995, p. 77). No Commonwealth framework for dealing with urban issues or policy exists at the time of writing. This is regarded as an issue by The Property Council and the Urban Land Institute (Spiller 2002). The Planning Institute of Australia which has a ten point plan for Commonwealth engagement in sustainable cities and regions (PIA 2004) and The Council of Capital City Mayors, an Australian organisation of the mayors of the capital cities with a secretariat funded by the local councils, 'has pledged to seek a new working partnership with the Federal government to invest in programs across sustainability, transport and infrastructure, social infrastructure, global engagement and tourism and city safety and security' (CCCLM 2006).

Much focus has developed around global cities, competitive practices and examples of 'paradigmatic cities in the development of city theory against the reality for the 'ordinary city' (Amin Graham 1997). The global city is described as 'a border zone where the old spatialities and temporalities of the national and the new ones of the global digital age engage' (Sassen 1991). Soja used six geographies to examine Los Angeles, one of the paradigmatic global cities, having arrived at these geographies by determining that each is 'a focus of research on the contemporary urban situation' (p. 129). His first geography arises from the

restructuring of the economic base in an international monetary system accompanied by changes in technology, the decline of manufacturing and introduction of flexible production systems, and increases in the finance, insurance and service sectors which results in 'urban, social and spatial division of labour' and concentrations of new 'industrial spaces'. His second geography includes internationalisation, the expansion of global capital and production processes and captures increasing migration, direct foreign investment. Thirdly, he describes a landscape of decentralisation and urbanisation of the suburbs. Here he is discussing the change from the concentric city which worked from the centre to the periphery and in his assessment is 'shaped by a complex redistribution of jobs, affordable housing, access to transit and modified significantly by income, racial and ethnic differentiation' (1995, p. 132). The last three geographies he says are 'crudely consequences of urban change'. His fourth geography is 'one of changing social structure with increases in social, economic and cultural inequalities or polarisation' (p. 133) and his fifth, related closely, is a geography of 'walled estates … spatial surveillance smart office buildings impenetrable to outsiders' … and a 'landscape filled with enclaves of outrageous wealth and despair' (p. 134). The sixth about 'the way we relate to our images of what is real to empirical reality itself'; Disneyland, for example, but also the 'intrusion of hyper reality into neighbourhoods, homes and shopping malls' (p. 134).

In Stilwell's assessment these geographies understand the city as 'how it embodies prevailing ideologies' (1995, p. 43) Soja's six geographies are discernable in ordinary Australian cities and are a stark illustration of what must be understood to produce the 'just city' (Amin Graham 1997, p. 427). Beer et al argue that in Australia, community and economic development have been separated with a priority on economic issues and that the 'poorer regions of our cities have been the biggest losers' because they fall outside the policy focus on rural regions (2003, p. 32). Gleeson et al argue that at the state level in the Australian context, urban planning has responded to current discourses of governance and sustainability such that key areas of concern with urban development are 'policy, space, planning governance, finance and democracy and that the *Melbourne 2030* plan, with greater support and focus on implementation might make a difference (2004, p. 345).

For the Northern Metropolitan Region of Melbourne current efforts have yet to make a difference in terms of an urban focus or frameworks for planning which could impact positively on the understanding of region and the regional economic development project. Soja's six geographies are apparent in the city with the restructuring of the economy and impacts on manufacturing, the global context and priority to develop the business services in the region, the sprawl at the fringe of the city and the increasing polarisation and

concentration of disadvantage in areas and although considerably less extreme than found in his paradigmatic city. The findings of this thesis would support greater attention to the influences of different levels of government and different policy agencies to support development with greater integration of economic, social and environmental issues.

Why Beyond the Industry Network

The study of the industry network established that the aims, objectives and operations were linked to a regional economic development project and were closely aligned with objectives in the social sphere as well. The questions in this study became concerned with understanding how the activity in this region was connected and why the industry network participants referred so consistently to two projects, the Whittlesea Youth Commitment and the campaign to bring the wholesale market to the north.

The economic development project in this region began from a concern about loss: loss of manufacturing as the key industry of the region and loss of potential through low retention rates in schools and low participation rates in higher education. The catalyst was the restructuring of Australian industry and the solution was collaborative action to work towards a positive future for the region. A key element was the involvement of the education providers and the priority given to social cohesion. There was always a strong link between the growth of industry and employment opportunities in the region and education.

Over time the concern about access and social cohesion has become stronger. There is also increasingly an element of 'our fair share' which is contextualised in the politics of the region. The area has always been a 'safe Labor seat', a predominantly industrialised and working class region with pockets of serious disadvantage. There is a commitment in the work to the economic development project and a strong underlying assumption that education is important in achieving this.

Both NIETL and NIECAP were established with a commitment to manufacturing as being central to the region's prosperity. There was a clear objective to grow industry and employment opportunities in the region and develop the skills of people in the region to match. Education and training were the initial priorities in three areas:

1. Work-based training, quality systems, new technologies, language, numeracy and literacy in industry
2. Science and technology education in primary and secondary schools, with
3. a particular focus on retaining students in secondary school and increasing participation in post compulsory schooling (NIETL 1990).

The priorities have expanded in the development of the understanding of industry needs beyond training and in the opportunities for industry development. They are now part of the Growing Melbourne's North project which has developed from the wider regional economic development objectives incorporated with the development of NACC and NORTH Link/NIETL. The two projects demonstrate these changes and the linkages in this economic development project. The Whittlesea Youth Commitment (WYC) has the characteristics of a community of practice, the other, the campaign to relocate the Melbourne Wholesale Market to the region, is focussed on learning in economic development networks in the region. Consistent with findings regarding the operation of the industry network (Chapter 4), both projects use a model based on research and collaboration and are supported by both the agencies, the NACC and NORTH Link/NIETL. They also demonstrate the ways the agencies support learning.

The Whittlesea Youth Commitment (WYC)

This Whittlesea Youth Commitment (WYC) started in 1998. It grew from concerns about the Youth Allowance Policy which meant that young people who left school would no longer receive assistance. With support from the university NIECAP began the project with research to understand the impact of this policy on young people. It highlighted some significant issues. The changes to the Youth Allowance aimed to encourage young people to stay in school by making them ineligible for support unless they were in training or education. This research found that young people did not know they would be without assistance or that limited support would be available to them if they left school. In one year four hundred and fifty young people left school in the City of Whittlesea and their whereabouts was not known. They were not tracked and it was not known whether they were in training, education or unemployed (Kellock 2001).

Local Research

A solid body of local information was developed, not exclusively within this project but drawing on information and resources in both agencies and the university. This included

- an environmental scan of youth participation in employment, education and training and the broader community services available to meet their needs
- a destination survey of school leavers
- an audit of career teaching and vocational guidance in the local public secondary schools
- a regional skills audit to identify skills strengths and weaknesses in local industry.

A funding map to chart the distribution of resources in employment, education and training from all sources, across the dimensions of school completers and early school leavers was developed for the establishment of the WYC. It highlighted that the average per capita resources to assist school leavers, including early school leavers in the region was less than Commonwealth estimates and this needed to be addressed (Spierings 2000, p. 9).

Establishment

The issue of young people at risk of leaving school early without pathways into further education, training or employment was high on the agenda of both federal and state governments at this time (see Chapter 3). A number of Commonwealth programs were introduced to address the issue, which had been under discussion since the late 1970s. By the late 1990s there was still 'very little success, as the numbers of 'at risk youth' had remained unchanged over this time' and Australia was 'one of the few OECD countries where school retention rates declined over the 1990s (Spierings, 2000, p. 3).

The notion of a Youth Commitment was first proposed in Australia in an OECD *Thematic Review of the Transition from Initial Education to Working Life—Australia Country Note* in 1997. The Dusseldorp Skills Forum (DSF) subsequently proposed 'an independent, not for profit body with a mission to achieve changes needed to enable all Australians to reach their potential through the acquisition of productive skills.' The DSF was well respected for leadership in this area and engaged with national policy debates. They published *Why Australia Needs a National Youth Commitment* in 2000 and were influential in the report from the Prime Minister's Youth Pathways and Action Plan Taskforce in 2001.

The NACC had been canvassing concerned parties in the region and there had been a number of local forums to gauge interest in the development of a project which focused on young people at risk in the region. The connection to the DSF was brokered by one of the new staff brought into the research project in NIECAP. The DSF was looking to develop a pilot Youth Commitment project and was interested in working with NIECAP and the NACC as there was a network already established. The intention to establish the Whittlesea Youth Commitment came out of a meeting which involved the DSF, NIECAP, management from RMIT University, the local government, schools, a job network provider, TAFE and employers.

It took time to establish. Having been initiated in 1998 with existing networks in place it took two years to achieve meaningful collaboration and levels of trust (Spierings 2000, p. 12). Research outcomes were very important in bringing people together around the issues.

Partnership

The DSF also brought new and vital information from one of their pilot projects in which they had trialed Transition Officers working in a community service organisation assisting young people at risk while they were still in school. They also brought information on general trends and issues for young people and their work in the formation of a 'Youth Commitment.' This knowledge was shared and used to demonstrate the importance and relevance of the issues to the very different organisations which needed to engage.

The original aim of the WYC was to 'ensure that every young person leaving school in the City of Whittlesea, especially those who leave before completing VCE or its equivalent, makes a smooth transition to another education option or further training or employment or their desired goal' (WYC 1998,p. 1).

The community team was the collection of organisations which formed the WYC. They had signed an agreement but made a very deliberate decision not to incorporate or enter into a formal arrangement as they wanted to retain a collaboration built on trust and shared commitment as expressed in the 'Spirit of Cooperation' signed by all. These organisations included

- nine industry partners
- two industry associations
- five job network providers
- four government agencies including Centrelink, the government social security agency, the local police and the Northern Adult and Community Further Education Board and the NACC
- three tertiary providers
- the eight secondary schools in the city
- two community agencies.

Resources

The WYC had one position funded initially by the City of Whittlesea and then with costs shared by the LLEN when it was established. It was housed by RMIT University, which provided physical resources as well as colleagues working with related issues and programs, and research and project management expertise. The Committee of Management was a small group who brought the community team together and planned activities and programs. The key resource was in the schools, where each school had a transition broker. These

positions were established initially with funds from the DSF, the City of Whittlesea, the TAFE and the university, and then funded under a Victorian government program called Managed Individual Pathways (DET 2006) which, rather fortunately, in terms of timing, came together well for the WYC. As described in Chapter 3, this program funded schools to provide a staff member to develop pathways and career planning with individual students. This was not just serendipity but rather evidence that the project was very much situated within the debates and the developments in national and state policy and programs. It was a measure of the level of collaboration amongst schools that they pooled the funding they received, to resource brokers across schools and other organisations and agencies.

The transition brokers mentor and support individual students in schools, identifying students at risk in years seven and eight, working with them individually to establish potential pathways, setting up interviews and contacts, and monitoring progress. The WYC coordinator supports the committee for management, the community team and programs which involve all the schools and stakeholders.

Outcomes

The outcomes and initiatives of the WYC include

- implementation of a common student exiting procedure used across the eight secondary colleges

- development and publication of the School Leavers Guide and the Education and Training Passport

- collection and sharing of data, agreement about benchmarks and willingness to increase the complexity and breadth of indicators

- appointment of transition brokers jointly resourced by the secondary colleges to provide counselling, advice and support to young people leaving school before completing year 12 and to track their destinations for at least 12 months

- establishment of the Community Team to develop cooperation and collaboration across agencies to facilitate tracking of young people and through consideration of anonymous case studies to explore options and appropriate support for young people

- implementation of an innovative mentoring pilot project to support young people who had left school before completing year 12 and had not moved into other education or training options or employment. Participants received training, access appropriate support services, undertook paid work placements and were matched with a mentor (Edwards 2002, p. 3).

What has proven so successful with young people is the case management approach. Early school leavers required support to build confidence, to create resumes, to identify opportunities, to be encouraged to continue to search for opportunities when unsuccessful, and transition brokers have provided this. The key area where the WYC acknowledges they have made little progress is in greater cooperation across the employment services organisations. This is a complex system in Australia since the disbanding of the Commonwealth Employment Services and the contracting out of different employment services with varied targets and priorities. The WYC would also acknowledge that it is difficult to keep employers engaged.

The Local Learning and Employment Network

The Victorian Department of Education implemented the first phase of the LLEN program in 2001. A LLEN covering the Cities of Hume and Whittlesea was included in this phase. The goals and the role of the LLEN and the WYC were very close, and the participants in the WYC were determined they were to be included in organisation and activities of this new body. The experience in this region was captured well in the review of the LLEN which suggested that considerable work was required to impose a co-ordinating structure in areas where other organisations and institutions were well established (VLESC 19 2002). As the LLEN shared the main aim of the WYC this needed to be established as complementary, not competitive. In the words of one interviewee 'the LLEN stopped the momentum of the WYC and the WYC made it more difficult to establish the LLEN'. There was also a feeling that because the WYC was not established and funded by the state government they were not valued as highly as a program 'belonging' to the government.

The WYC grew from local issues and local organisations, when faced with the facts, were committed to being part of the solution. This was desirable in the implementation of the LLEN but was difficult to develop with implementation timelines and accountabilities. The LLEN were imposed in areas by government, with requirements and funding accountabilities which would be very challenging to government to manage any other way. Membership was also contested, as it was 'drawn from any individual or organisation with an interest in post compulsory education, training and employment within the area covered by that LLEN' (DET 2007)

The aims and objectives of the LLEN program were clear but have played out differently in diverse areas, depending on the skills of the Chairs and executive officers, local priorities and conditions (DET 2002, 2004). The WYC responded to a clearly defined problem and

engaged people in organisations who could see their obligation and a role in the solution. The world of the WYC was not without politics and agendas. For the WYC, however, the responses were more clearly defined by the issues than by the power and position of organisations, as many other LLENs experienced. The WYC was fortunate in resourcing, but it has been a continuing concern. The LLENs were seen as diverting funds to be used towards other agendas (DET 2004). The LLENs , however, did have access to state government programs and direct access to a state government committee with an aim to make progress in cross-departmental initiatives. This was an avenue for change with far more potential than the WYC could achieve as a local entity.

The WYC were insistent on having a role in the implementation of the LLEN. In this context they were described as an 'in group' clearly influential in the politics in the early discussions and establishment of the LLEN. The participants in the WYC had the ability to draw on support through the Industry network and regional economic development project. It was important to those engaged with the WYC that it be considered carefully in the establishment of the LLEN to ensure the real outcomes and work already underway were not lost. More importantly the work of the LLEN should be seen as additional resource and support. The LLEN was also potentially a significant agency in the regional development project which also ensured engagement from the NACC and NORTH Link/NIETL.

It does beg the question, of course, why the LLEN had to be imposed when the WYC was in place. The development of the LLEN was informed by the Youth Commitment model and the government was committed to dealing with the issues the WYC was engaged with. It was not the model that was the issue but the implementation. Theoretically the question is partly how knowledge is gained and valued across organisations and the different worlds of government and community. The WYC had developed a 'shared understanding'; their knowledge was 'encultured' and 'embedded' in the routines of their practice (Blackler 1995). They had formed a community of practice. The knowledge which was transferred to the government from the WYC was useful: it informed the development of the LLEN program. As discussed in Chapter 4, knowledge is more than something possessed and written down. In this lies a key challenge in policy and programs as it raises questions about how different levels of government interact and how local knowledge is understood, valued and incorporated or accommodated in programs.

At the end of the period of this study the issue of the roles and compatibility of the LLEN and the WYC was not entirely resolved. The LLEN use the WYC management committee as a local planning group, and have contributed funding to support the position in the WYC, but

questions remain about the role of the WYC and how it needs to work within the LLEN framework. The aims and objectives, strategic and work planning are under review.

Community of Practice

The WYC represents the community ownership of the issues of young people leaving school early or at risk of doing so (Kellock 2002, p. 16). The agencies and organisations involved identify their part of the problem or the way they see/experience the issues, but through the WYC the issues are owned and worked on as a community. There is a strong identification within this community as it is both 'place based' and focused on very real and obvious issues of relevance and importance to the stakeholders. Also the attention to research and indicators that support the understanding of impact and changes has provided local data and concrete goals. Considerable trust was developed through the process of collecting individual organisations' data and aggregating it, and considerable care has been taken to keep the bigger picture approach through developing solutions across the organisation (Kellock 2001, Edwards 2002).

The WYC exhibited characteristics of a community of practice. The experiences described by participants demonstrated a close, committed working relationship with learning central to the discussion. The group shared a 'passion about the topic' and 'deepened their knowledge and expertise by interacting on an ongoing basis' (Wenger et al. 2003, p. 4). The interviewees described the Whittlesea Youth Commitment as 'more than a project'. It was a 'collective process of negotiation', and in Wenger's terms a 'joint enterprise', where participants developed 'mutual accountability and a shared repertoire' (1998, p. 82). Different organisations brought different issues and ownership to the community. One interviewee said 'there were some heated discussions and it took time for people to trust each other especially because of the sensitivities around some of the data'. There were concerns amongst the schools in particular who were sensitive to comparisons of school leaver data and students at risk.

The repertoire of a community of practice is both the 'reificative and participative practices' (Wenger 1998, p. 83). In the WYC this repertoire of participative practice included the description of the work as 'action research' and for all participants a familiarity with data sets and policy frameworks. The repertoire evident in reification was found in the documentation that described the practice, provided tools for others to develop best practice as well the documents which were developed for common practices such as the school exit form. Notable also was the support provided to the group. Interviewees described the provision of

an administrative support person as critical. They were aware that the aims of the project and the action research were supported by being able to meet in places which were central as organisations were spread over the area but also neutral which allowed a sense of freedom for discussion. Interviewees also highlighted the celebrations which brought the group and stakeholders together and gave the young people a chance to speak 'and to shine' as important for the ongoing development of relationships and trust. This was highlighted by all interviewees. In the words of one participant:

> Schools, enterprises, service and job providers, police and local government don't sit down together too often, our organisations are very different, the way we work, the way we organise and even the way we talk. We were engaged in an action research project but we were equally engaged in researching each other.

Learning

Interviewees again were comfortable talking about learning and could identify their experience with the community of practice. The development of indicators and the ongoing research that provided real data and formal approaches to solving problems was important to many of them. The WYC, according to a number of those involved, and supported by the Kellock review undertaken in 2001, grew from good relationships across organisations and good research that highlighted the local issues. The results from the small research projects provided specific local knowledge and data. This brought people together because they could see how their organisation could play a part in addressing the problems represented by those statistics. One interviewee commented 'when I saw the numbers I just felt so responsible – those were real numbers, real kids that we could help'.

Clearly a dynamic environment was created in the early stages of the WYC and there was excitement and sometimes tension in the development of the project. People felt they were learning and involved in something new and innovative which would really make a difference. A technique which supported learning was the use of anonymous profiles for community case management in discussions involving the participating agencies who worked with young people (for example, youth workers, job network providers, education providers and police) at their meetings which were held approximately six to eight times per year. These examples provided the opportunity to learn about the responses from different organisations but also to learn about the expertise of individuals working in different services. It was a period where people were changing how they worked, through collaboration with other organisations. One interviewee suggested that a key learning might be

> that it is possible for the community to learn, to change what they are doing… it was a special project and we all learned from each other and now even though it

is not so exciting we all can take that belief and that experience, and make it happen again when we see an opportunity.

There is evidence and thorough documentation of the learning available from the Dusseldorp Skills Forum Tools and Resources web site. These include a Youth Commitment resource kit and self-assessment kit to enable practitioners to assess best practice (DSF 2007).

Conclusion—WYC

The future of the WYC was undecided at the time of this study, and there was a sense amongst some that the LLEN could subsume the WYC. This was strongly contested by the participants who were committed to the project, who said they wanted to continue working in the WYC. Those involved in the LLEN had great respect for the work of the WYC, and believed a great deal had been accomplished. As some members of the WYC have also joined the LLEN learning is potentially transferred and knowledge shared. The role of the WYC in relation to the LLEN is being clarified.

There was considerable work beyond the investigation in this study to support the conclusion that the Whittlesea Youth Commitment was an exemplary project. The Kellock review had positive findings and the *Prime Ministers Youth Pathways and Action Plan Taskforce* in 2001 chose the Whittlesea Youth Commitment as an example of the key features of collaboration, and a 'classic example of a good action research project' (2001, p. 199).

The Review of the LLEN undertaken over 2004 raised very pertinent issues. It acknowledged how long partnerships take to develop and to deliver gains to the community, and it listed barriers to improving outcomes for those at risk of not succeeding as

- achieving the cross-government collaboration on which solutions depend
- building genuine local community accountability
- accepting the resource intensive nature of assisting those missing out
- dealing effectively with the factors leading to poor engagement with schooling in the years prior to the post-compulsory levels (BCA 2003, p. 22 in DET 2005).

The Whittlesea Youth Commitment grew from local collaboration and commitment. It was developed according to the model identified in the projects in the case study of NORTH Link/NIETL, based on research, collaboration and in this case partnerships. Potentially the LLEN, rather than being competition, could become a vital lever in the critical area of joining up government programs and responses. In the Review of the LLEN the Northern Area Consultative Committee, well experienced with these issues in this region, asked the

question: 'Can you reasonably ask LLENs for a whole of community approach without Government providing a whole of government response?' (DET 2005, p. 50).

The WYC established a foundation with strong community collaboration. If the LLEN can support the continuation of this community and the government can take on the concerns presented through the channels provided by the LLEN this project is well positioned for the ongoing success.

The Whittlesea Youth Commitment is an example of how knowledge and learning by the local practitioners can be seen and appreciated by government but not necessarily supported. The outstanding outcomes are the local solutions. The experience of the WYC highlights the limits of local action without the matching program and policy responses from government, but is hopeful in that lessons have been learnt, strengths acknowledged and learning documented. The LLEN because it was linked to a government Statutory Authority; the Victorian Learning and Employment Skills Commission has the potential to bridge the gap between the local activity and the state level of government, and to be another key agency in the Growing Melbourne's North project.

The Campaign to Bring the Wholesale Market North

The Melbourne Wholesale Fruit, Vegetable and Flower Market was originally located in Footscray, near the Melbourne Port. The decision to relocate the market was made in 2005 with the aim of allowing major expansion of the Melbourne Port. There emerged two possible sites for the relocation: the western metropolitan region or the north. There was intense lobbying from both regions with considerable political advantage in the west where allies of the state government were located with major transport company interests. The more logical, by location and popular choice with wholesalers, was the north with proximity to the road transport system and more direct access to the majority of producers located north of Melbourne which would avoid travel through the city and lessen the distance traveled.

The Wholesale Market was at this time a major enterprise. It had an annual turnover of 1.7 billion dollars and consisted of approximately 2,700 business and 7,000 jobs (DPI 2006). The proposal to develop a campaign to bring the Wholesale market to the Northern Metropolitan Region was initiated by the Directors of Economic Development in the Cities of Hume and Whittlesea. They asked NORTH Link/NIETL to support them and a working group of NORTH Link/NIETL was formed from its membership. Advantages to the region were identified as employment opportunities and business in transport and logistics, education, training and business services plus short-term benefits in development and building. There was longer term potential as the market could lead to improved transport infrastructure and positioning in

Melbourne alongside the Melbourne Airport.

Collaboration

The campaign in the Northern Metropolitan Region was auspiced by NORTH Link/NIETL, with considerable support from the NACC. There was a cash contribution from each of the local governments and NORTH Link/NIETL. The NACC provided administrative support and considerable time commitment when approaches were made to government departments and members of parliament. The team put together to run the campaign was a working group of NORTH Link/NIETL and included the two Directors of Economic Development, the executive officers from the NACC and NORTH Link/NIETL, an education and an infrastructure representative from the NORTH Link/NIETL Board. NORTH Link/NIETL also provided media and PR support. The funds for the project were spent on research and a consultancy which was engaged to support the surveying of stakeholders, the development of the argument and reports plus additional media expenses. The time, travel and contributions from the members of the working group were in kind contributions.

Research

A critical element of this campaign was the research conducted initially on all elements of the relocation. This included market research and surveys of the wholesalers, with facts and information on potential location and sites, and on impact.

A crucial strategy in the research was time and energy spent talking to wholesale market representatives in wholesaling, retailing and growing. It was acknowledged generally that the deciding factors in what became a political battle was that the majority preferred the northern location if they had to relocate, and that the northern campaign had the support of the market administration.

Advocacy

The second key strategy was the concerted effort to meet with all relevant members of Parliament and key members of the government bureaucracy in Major Projects and Regional Development. The links into the state government bureaucracy had been developed through projects and issues over years. These linkages were important as support from the bureaucracy assisted the organising of the meeting and the attendance of the members of parliament. The targeting of local members of parliament was a new approach for the network. It grew out of the realisation that the real contest was political and if they were to make their case they would have to be 'on the same playing field as the proponents of the western location' (interviewee).

Communication and Public Relations

The strategy of involving local members also drove a strategy of communication and public relations. It was clear that it would help keep the attention of the politicians if the story had profile. Articles in the local papers, radio and a well planned publicity stunt with fluorescent jackets at the Wholesale Market at dawn produced some good visuals and were part of a continual media effort to keep the issue in the public arena. There were also public forums and a number of network meetings which provided information and aimed to engender support for the campaign.

Resources

Members of the working party and a small number of other participants were co-opted in to the campaign for short working stints. The coordination and administrative support came from the NACC. NORTH Link/NIETL provided the communications and PR support and also drew on their membership for the working group members and others. Both agencies had access to the research consultants and contacts they needed to proceed with the campaign. Cash contributions came from the cities of Hume and Whittlesea as each had a potential location. Although only one would win the relocation they accepted that it would be good for the region and more indirect benefits would flow to their area even if the Wholesale market was located in the other.

Success

The campaign was successful and the announcement that the Wholesale Market was to move to the Northern Metropolitan Region was made in November 2005. The participants could identify a number of key factors in their success.

It had been determined it was absolutely necessary to enlist the support of local politicians or persuade them of the importance of the decision to their electorates once the extent of the politics of the decision making process became clear to the project team, through their own research. Given the pressure on time this developed as a meeting with the group of local politicians, both state and federal. The agenda was a presentation making the case for the region. Not only was this highly successful in this specific campaign but it has resulted in biannual meetings where NORTH Link/NIETL present key issues and seek suggestions for action from the politicians. NORTH Link/NIETL also receives requests from other organisations to leverage for their cause. A university has sought assistance attracting the relocation of a government department to its campus, and a developer for support in attracting business to its industry park.

Success here was also seen in the invitation to take up membership on the Committee for Melbourne, a member based incorporated association described in Chapter 3 which 'aims to champion issues to make Melbourne successful' (Committee for Melbourne 2006).

Learning

The working group involved in this campaign were not a community of practice. They were a project team brought together to work on the campaign. The campaign used the model developed in the regional economic development project based on research and collaboration. Interviewees described their experience an enjoyable but demanding effort and were comfortable discussing learning.

The political lobbying was an area of learning demonstrated in this project. Individuals were learning to value the organisational position of NORTH Link/NIETL and how it could be used to gain an audience and garner credibility for lobbying and positioning. Many would point to the industry network as the reason government listens, and the reason industry join. It is not seen as network run by self serving interests, neither government nor industry exclusively. This is potentially a 'fine line' as described by a member of the working group 'as lobby groups are not necessarily popular with government and government funds are also necessary for our projects'. There is a sense that to keep these important relationships balanced 'the relationships with the members of parliament are formal and the meetings held with the group of local members are open and well attended' (interviewee).

The support for the project was also highlighted and appreciated. The working group members were able to spend their time developing and running the campaign. The administration of funds, the documentation, the meetings and the venues were all organised through the administrative systems of NORTH Link/NIETL and the NACC.

The interviewees were also proud of this effort. The campaign was an opportunity to 'get out there and fly the flag, let people know where you stand' and use the 'local knowledge and networks to support this'. There was a strong sense that this project was iconic because it promoted the region and provided an example of the strength in the collaboration and partners. One interviewee said 'it proved we don't have a silo mentality and innovation is supported so NorthLink doesn't just sit in the mould of what it should be doing but is really responsive to issues and opportunities'.

Conclusion—Campaign to Bring the Wholesale Market North

The win for the north was made possible through the well-researched campaign and the wide

audience they had reached, particularly the politicians and the media. It was also a win for the regional economic development project as the positioning of the region was an important element in the campaign.

The campaign to bring the wholesale market to the region does in some ways encapsulate the learning in the regional development network about the need to get above the local network and demonstrates the initiative taken to attract the attention of decision makers. It also highlights the difficulty in collaboration and cooperation across levels of government. It is a reflection of the regional development project that the collaboration was strong enough at the local level for the local government participants to cooperate. It is also an example where the state government had to choose a winner. There was nothing in place at the city level to moderate the competition between regions within the city and no framework for urban infrastructure which might have made a decision more straightforward for example; informed by current and future transport infrastructure.

The campaign demonstrated the ability of the regional economic development project to garner resources quickly and establish a well-researched and co-ordinated campaign. It was also an example of the level of collaboration across NORTH Link/NIETL and the NACC.

The Regional Development Project

These two projects represent two aspects of this regional development project. The WYC was embedded in the same concerns that were the catalyst for the establishment of NIETL and NIECAP. The campaign to bring the Wholesale market to the north reflects the introduction of the broader regional development priorities. The connection across the two was driven both formally through the strategic plans and projects operated by both agencies and supported by the facilities of engagement, imagination and alignment which they provided. In addition to the two agencies, individuals identified as members of the 'central' community of practice were active in the conversations and forums which led up to the establishment of the WYC and supported the campaign to bring the market to the north. The members of this community of practice supported the development of these new projects, drew in new participants and influenced the agencies as well as worked to support the work of the agencies in the region.

The Model and Support

Both the WYC and the campaign relied on solid research and networks and contacts, locally and outside of the region to bring the necessary players to the table. In the WYC this was through identification of local organisations with a stake in the issues for disadvantaged young people and through connections to the national discussion. In the campaign this was

through the networks and the research into the stakeholders. In both projects NORTH Link/NIETL or the NACC were available to support the development of the project. They provided the initial meetings and opportunity to develop ideas and the initial research to establish the need for the project. They were able to provide administration on a substantial scale. In the WYC this included an office space, computer and IT and the ability to manage funds on behalf of the project in addition to organising meetings and events, minutes and documentation. For the campaign the administration and management and included again, the ability to enter into contracts and manage funds as well as the day to day administration of consultants, meetings and events.

Communication

Communication was very important in both projects. It has been a priority of the agencies, and in discussion the emphasis is far wider than the two projects under discussion. Both NORTH Link/NIETL and the NACC produce publications of high quality, for distribution across the region, to stakeholders and to government. NORTH Link/NIETL have an ongoing part-time public relations consultant with a focus on local media and opportunities in the bigger media. It was suggested in one interview that this outlay was 'wasted expenditure, over emphasis on promotion, and an expensive overhead in projects which would be better spent on the projects or taken out to reduce the cost for competitive in tendering processes'. In the campaign , however, this was identified as critical and the readily available skill and support for public relations activity identified as a success factor. In the WYC this communication was seen as important for reaching young people and their families and in getting a message to the community about opportunities for young people and the benefits for enterprises in engaging with education.

In discussions with members and in documentation the focus on communication served a number of purposes. The following was taken from strategic planning documents and interviewee comments:

- To have available materials to promote the effort to government, funding bodies, new members and organisations which support the agencies through cash and in kind contributions
- To have a history documented to be shared with new members or organisations and to ensure history is captured
- To celebrate achievements—many successful companies, individuals and projects are featured

- To provide information to local communities, to provide good news and success stories about the region and to support the aim to develop a regional pride and commitment, and awareness amongst the communities

- There is also a Northern Ambassadors program where NORTH Link/NIETL has invited 'recognised business persons acting in honorary capacity with a genuine desire and commitment to putting something back into the region' The aim is to twofold, one having role models of success and two, having successful people linked to the region who assist the project (NORTH Link/NIETL Strategy 2006).

On a more day-to-day level the dissemination of information and learning outcomes was viewed as a very important function. Although this can be linked to diffusion, not innovation, it is related to increasing adoption of better practice (Wilson 2005). There was a high value placed on the provision of information and promoting opportunities through sharing of experiences and success stories. The information provided by the agencies was trusted and they were not seen as a 'mouthpiece for government and provide good information about what is available in government and other programs' (interviewee). There was concern that just hearing about new practices would not lead to learning or change and that the reach was not comprehensive so new ways of attracting participants were needed. There was a commitment to engaging participants in more than networking by providing a variety of projects or programs consistent with theories of knowledge sharing and technology transfer and diffusion (Rogers 1995). The local knowledge of activity was seen as important both for expanding activity and developing pride in the region but also in terms of advocacy and positioning to ensure advantage to the region or 'a fair share'.

Membership

There is potential for a 'dark side' to this network (Field 2006, p. 1). As discussed in the WYC interviews this group was identified as an 'in group' and exclusive. From the membership lists of the boards, the projects and the industry network the following were identified:

- The membership of the both boards has been fairly stable.
  - o In NORTH Link/NIETL, this membership was based on the member organisations and representation comes with the position eg Director Economic Development from local governments, assigned by the institution for the education institutions with no restrictions on industry members as the challenge was to attract them on to the board. There have been two chairs over the life of the agency. Industry members held positions for generally two

years and education and local government varied considerably as they were linked to work situations or retirement and ranged from one to ten years.

- o It was much the same for the NACC as key organisations and institutions must be represented as required by their charter. Membership here was considered volunteering although some members with related institutional roles were members supported by their work. The inaugural chair who was an industry representative, has remained in the position up to the time of this study and was appointed by the Minister of the responsible federal department.

- There has been throughout the history of the two organisations representation on each board from the other, plus the executive officer from each organisation. This has been a deliberate agreement between the two organisations to support collaboration.

- At board level here has been an imbalance in gender with women under represented although this has improved over the three years of this study, and missing was representation of more recently arrived migrant groups. This would be at least partly because of the role and history of participation of the manufacturing industry but it did not reflect well on the diversity in management of organisations and institutions in the region generally. Participants in projects, working groups and project committees were considerably more diverse.

- Involvement in projects was difficult to analyse with participation being dependent on an organisations commitment and willingness to contribute.

- o In NORTH Link/NIETL there were no projects where enterprises were involved in more than one project a year although there were a few projects which have turned into long term commitments, local governments contributed to one or two projects per year and the same for the education institutions (NORTH Link/NIETL 2006).

- o In the NACC projects it was difficult to determine if participation might indicate exclusivity given it was required that partners put forward applications for funds and there were dollar and in kind contributions required. This meant that the universities and local governments were involved in a number of projects. As an example in one financial year each university was involved in three projects and two of the local governments were involved in four, and five projects respectively, and in two together. (NACC 2005/06).

- There were a small number of representatives from enterprises who were regulars hosting industry tours or meetings and used as speakers. These were voluntary contributions and they identified this work as beneficial to their enterprise and as 'giving back' as they had been involved in projects but no longer had time to commit to ongoing obligations such as the board.

- NORTH Link/NIETL membership had a thirty per cent regular turnover with new enterprises joining and others leaving or closing down so could be considered fairly stable (NORTH Link/NIETL membership data base 2005, 2006). Industry breakfast attendance ranged from eighty to one hundred and sixty. Consistently approximately twenty per cent of attendees represent education, government or Industry associations and these were not always the same representatives as they will be from the discipline or government program related to the topic. There may also be places allocated to students.

It was difficult to determine whether these facts suggested open and transparent membership processes or exclusive organisations because board membership has been tied to work roles in a large percentage of positions on the Boards and often the challenge has been to find people prepared to put in the time and commitment. Also there has been a priority given to having representation from the key institutions. This was a deliberate strategy to strengthen the position of the networks and the sustainability of NORTH Link/NIETL which depended on memberships. This has narrowed the choices and limited broader community input.

A 'Central' Community of Practice

The examination of the network using communities of practice framework led to the identification of a community of practice which seemed at the core of the project, working through the agencies to engage different organisations and key people in the region to combine resources and increase collaboration. Key members of project teams in a number of areas of network activity were in this community of practice and were positioned strategically through organisational and personal networks. The 'mutual engagement' and 'joint enterprise' was strong with a commitment to the economic development project and in some cases to the role of their respective institutions in the project, as well. This group had a shared repertoire and an ongoing practice of bringing in new members who might move from periphery to the core, or remain on the periphery. Based on a small number of examples these new members could choose to remain at the periphery even though they had a leadership role in a project or they engaged in this community of practice but are engaged primarily in a different network for example in the health sector or with a migrant group.

This central community of practice extended their discussion, and 'negotiated aims and mutual accountability or obligation' through the agencies and auspiced working groups. They brought their ideas or responses to issues to different groups through the agencies and supported the initiation of new projects. Some of the individuals in this 'central' community of practice were widely recognised but it is the agencies which led the economic development project. This community of practice supported individuals in a range of projects, in different sectors and in keeping enthusiasm and ideas vibrant. Members from this 'central' community of practice were not necessarily involved in other communities of practice but were visible in the development and establishing of their projects.

The Infrastructure of Learning

Wenger theorises an infrastructure of learning which includes facilities of engagement, imagination and alignment. This is described in Chapter 2 and is used here to provide a framework to understand the way the agencies supported the learning in the region and the development of projects and communities of practice (1998, p. 238).

These facilities emerged in the examination of the WYC and the campaign to bring the wholesale market to the north through the identification by participants of the support from the agencies. The 'infrastructures of learning' framework provides a way of identifying the common elements which link the projects and support learning across the networks. This table provides a summary using examples from the WYC, the campaign and the economic development project itself (the column titled Region in the table).

Table 2 'Infrastructures of Learning' Framework

Engagement

Mutuality	WYC	Campaign	Region
physical and virtual spaces, joint tasks the availability of help, peripherality -boundary encounters ways of belonging to different degrees, eg. casual encounters	- community meetings -NIECAP (university) & local government provide spaces NIECAP provides administrative support - call for participants	- public meetings - stakeholder meetings - supported by NORTH Link/NIETL which organised administration, meetings,	- public meetings, information, - networks across sectors - projects, working groups - meeting spaces, -web pages - administrative support, catering

			- contacts data bases, mail outs
Competence	**WYC**	**Campaign**	**Region**
initiative and knowledgeability, activities that bring about knowledge of engagement, occasions for applying skills - problems that engage energy, creativity and inventiveness, accountability, exercising judgement tools, artefacts that support competence; discourses, terms and concepts	- research and the issues engaged the stakeholders - project with DSF -developed the proposal for a passport, - development of standard procedures for school leavers - training of transition brokers and teachers in schools	-research -project team - development of strategy and actions	- *Growing Melbourne's North* - establishment of working groups, projects -media & communications strategy for both NACC & NORTH Link/ NIETL - training, minutes, - publications, - background materials
Continuity	**WYC**	**Campaign**	**Region**
Reificactive memory; repositories of information, documentation and Participative memory; generational encounters, apprenticeship systems, paradigmatic trajectories and storytelling	-documentation of the meetings, case studies for discussion - events where young people told their stories of success to schools, government and industry audiences - tools developed and on web site	- minutes of meetings, proposals, press releases, local media stories	- *Growing Melbourne's North* - regional publications eg Northern Contact - NACC and NORTH Link/NIETL web pages -Launches, events - bringing in new members to working groups, public meetings, boards, project groups and community of practice

Imagination

Orientation	WYC	Campaign	Region
Location in space, time, meaning and power	- policy context of Australia and Victoria -current issue presented to local stakeholders	- urgency of issue oriented project - meaning according to stakeholder groups	- *Growing Melbourne's North* - role of agencies over time - communities of practice
Reflection	**WYC**	**Campaign**	**Region**
Reflections: models & representations of patterns, time off, breaks in rhythm	- model for projects research, collaboration & partnership - intense project concerted activity at times -model from DSF developed across schools	- model for projects research, collaboration & partnership project scope - intense periods in lead up to critical events	- model for projects - body of research and documentation - timing with funding, program objectives - events to mark success or new activity
Continuity	**WYC**	**Campaign**	**Region**
Exploration; opportunities and tools for trying things out, envisioning possible futures	- Spirit of cooperation, - meetings, presentation from DSF,	- Early discussions and strategy development	- Strategy and planning in agencies - Working groups and projects - Industry breakfasts, tours, launches & celebrations of projects

Alignment

Convergence	WYC	Campaign	Region
Common focus, cause or interest, direction etc and allegiance, leadership, sources of inspiration	- research to highlight local issue - NIECAP took leadership but handed over to local government	- urgency of issue oriented project - meaning according to stakeholder groups	- *Growing Melbourne's North* - role of agencies over time - communities of practice -projects which make a difference

Co-ordination	WYC	Campaign	Region
Standards and methods; processes, plans, styles and discourses Communication; information transmission, spread of novelty Boundary facilities; brokers, objects, support for multi membership	- model for projects - Spirit of cooperation agreement - Documentation, DSF website - Links to other networks, executive officer support	- project model and strategy - media and PR - NORTH Link/NIETL took up leadership and supported LGA's involved	- model for projects - body of research and documentation - Publications, project plans & documentation - Local media, PR - biannual meetings with members of Parliament - events to mark success or new activity - network activities
Jurisdiction	**WYC**	**Campaign**	**Region**
Policies, contracts, due processes, mediation, conflict resolution, distribution of authority	- Spirit of cooperation, Chair of committee in leadership role - minutes, contracts with funding bodies and across organisations	- Contracts with consultants, - NORTH Link/NIETL leadership	- *Growing Melbourne's North* - NACC Charter and planning documents, NORTH Link/NIETL contracts - Agency boards - project management

There are examples of these facilities across all three projects. The facilities of engagement are evident in how the agencies establish projects and support their development and implementation. The establishment of project teams, project management and administrative support, communications, publication and documentation are elements of this. The initiatives grow from the networks and local issues which is critical element in the engagement of participants, both existing and new members. The facilities of imagination are supported through the work of the agencies in the research and background work undertaken for the regional economic development project and the development and use of the model for projects. Again the support for the project teams is critical here. There have been public meetings and information provided on the issues to create interest and bring out stakeholders. The research and potential to solve the local issue was presented to engage

'energy creativity and inventiveness.' Documentation supports the group and publications and tools were used to communicate the activity, document history and demonstrate capability in the region. These activities have allowed for engagement at different levels or to different degrees and supported the exploration of solutions and 'envisioning possible futures'.

The facilities of alignment are also critical infrastructure. Without the facility of jurisdiction, the ability to develop policies, contracts and distribute authority, it would have been difficult to work with the range of projects and organisations. The difference between the WYC and the campaign to bring the market north are examples of this. The WYC set up its own infrastructure once established but the NACC and the university provided the initial location for the support person and the ability to enter funding contracts. The campaign only required support for the duration of the project. Both required the capabilities of research and consultancy and both were subsidised by work in other projects through the networks. In both convergence was important where a common cause was the source of inspiration and leadership was provided; in the case of the WYC until it was developed within the project.

In Wenger's terms, there was a 'landscape' of the Northern Metropolitan Region which has a relief map of this infrastructure: places and events, meetings and forums supported by expertise with ideas circulated to 'gather and engage energy, creativity and inventiveness' (1998, p. 243). Projects are established and some form communities of practice, and these are at different stages which come and go according to their life cycles. Across the map were criss-crossed lines of the agencies providing different facilities into different projects and aligned to these are the key organisations and institutions. At the heart of the map was this 'central' community of practice, with members drawn from the agencies, key institutions and groups. The strength of the regional economic development project and the agencies depended on this diversity and depth of networks, though at the same time this also feels precarious as it depends on this range of people and organisations supporting the project.

Conclusion

These two studies do exemplify excellent work at the local level. There was in the case of the WYC some degree of learning and policy development and although the implementation of LLEN policy was 'unthoughtful', there was a chance that this might still link the local effort with state policy and programs and support some dialogue which brings the distinct local areas of the LLEN into the policy conversation across government at the state level.

At the local level both examples achieved outcomes for those involved and made a difference. The architecture of learning revealed the soft infrastructure which answered the question 'Why there is learning across networks?'. As emerged in the study of the industry network, NORTH Link/NIETL and the NACC had developed a model for projects which supported learning across the network and was based on research, collaboration and partnership. Findings from this stage of the study suggested the approach in this region which integrated elements of economic development, built social capital and the engagement of participants from different sectors and organisations has had a profound effect on learning and change. At this stage of the study I return to the CRITICAL project and use the typology developed to identify characteristics of the learning region to answer the question: Is the Northern Metropolitan Region a learning region?

Chapter 6

The Learning Region

Chapter Summary

This chapter discusses the development of the concept of the learning region and the current state of theory building. It further develops the discussion of lifelong learning through consideration of the role of the university in a learning region. In this chapter the typology of the learning region developed in the CRITICAL Research project is applied to the Northern Metropolitan Regional economic development project. This exercise is used to test the typology and analyse the data gathered in this study. The chapter includes a discussion of issues and factors which have emerged through the case study and an epilogue which provides a snapshot of emerging changes that may determine the project's future.

The Learning Region Concept

The concept of the learning region came into prominence through a landmark OECD study in 2001 which developed case studies of regions but identified no 'pure learning region'. The study recommended ten policy principles for creating learning cities and regions, as listed in Chapter 1 of this thesis. The principles make learning central to the planning and development of the learning region and attempt to draw together findings from a range of research and policy developments so as to integrate approaches.

As discussed in Chapter 1, a case study of Melbourne was developed as the fifth case study in the OECD. At the conference held in Melbourne in 2002, discussion of the ten policy principles was brought together around four themes:

1. sustainable economic growth

2. social inclusion and the building of social capital

3. the role and limitations of different education and training strategies in fostering learning cities and regions

4. an integrated approach to achieving good governance (Conference on Learning Cities and Regions, Melbourne 2002).

The themes reflect the thinking in the development of the learning region concept. There are, however, a number of approaches to the learning region concept. One such approach takes an 'analytical approach' seeking to identify mechanisms which support successful regions.

Another takes more of a 'strategic perspective' and examines governance and regional decision making across a region. Another perspective is presented by Fürst who identifies four conceptual differences: a **cognitive** concept of the learning region which stresses the importance of endogenous knowledge, a **political** one which stresses the significance of networks, an **economic** one which incorporates the concept of clusters and a **diffusion one** referring to difficulties in implementation (2003 in Charles 2006, p. 17).l These different approaches are important as they develop understanding of how the learning region operates, and focus on different aspects at the local and macro level. The concept of the learning region was developed to assist in the improvement of 'economic performance in the new learning economy' by understanding 'relationships between various forms of learning and economic performance' (OECD 2001).

As discussed in Chapter 4, interest in the 'region' as the 'locus of economic organisation' has been prominent through the last twenty years in the context of globalisation and the shift towards a 'knowledge driven economy' (Amin & Thrift 1995, Cooke & Morgan 1998, Maskell & Malmberg 1999, Storper 1997). The region is important because at this level 'social capital and the ability of firms to learn' is identified as necessary for 'innovation to occur' (Morgan 1997, p. 491; see also Chapter 4). Location is important in the generation, exchange and application of knowledge. Innovation in the learning region occurs because of the local availability of skilled labour, knowledge production and knowledge-based industries enabling knowledge transfer, spillovers and exchange through clustering and supply and other value exchanges amongst firms. Cooke and Morgan stated that 'economically successful regions are learning or intelligent regions' (1998, p. 24). There has been a developing consensus that the 'impetus must come from within the region' and that 'regions were becoming the focal points for knowledge creation and learning in the new age of global, knowledge-intensive capitalism, as they in effect become learning regions' (Florida 1995, p. 15). In innovation systems research the university has had a critical role. It is seen as a 'knowledge centre' and important in the creation of new knowledge, a place of technological experts and 'blue skies' research or discoveries, contributing to the development of innovations and local knowledge and labour market development (Lorenzen 2001, Castells and Hall 1994, Coldrake and Stedman 1998, Gibbons, 1994).

The University and the Learning Region

The university plays an important role because of its position of engagement with both the innovation system and the learning society and through the encouragement of lifelong learning. The university is positioned uniquely because of its ability to be reflective, to lead and contribute to debate, as well as undertake policy evaluation and development. In

discussions of the learning region, the university is identified as a partner in the region.

This is promoted in a context of globalisation and the knowledge society debate, at a time of mass higher education and corporatisation of universities (Marginson and Considine 2000). The role of the university is under considerable scrutiny and debate in this context. This emerges in different ways in different reports, projects and policy. For example

- in Evaluating the Regional Contribution of an HEI which supported benchmarking of university engagement (Charles and Benneworth 2002),

- in the Wingspread Declaration on Renewing the Civic Mission of American Universities committing universities to a role in building civil society (Harkavy 2001),

- the OECD report *The Response of Higher Education Institutions to Regional Needs* (1999) and the Institutional Management in Higher Education (IMHE) titled *Supporting the Contribution of Higher Education Institutions to Regional Development* both in depth studies of the contributions of universities and the diversity of approaches (2006),

- the Australian review of Higher Education, *Higher Education at the Crossroads* which collected submissions from industry, government and the education sector, stimulating considerable discussion and resulting in reforms to the sector (2002; see also Chapter 3).

Estkowitz and Leydesdorff (1997) put forward the triple-helix model of university–industry–government relations, highlighting the linkages and interdependencies across the three and the support underpinning the industry connectivity. In this model the system is dynamic and 'each strand may relate to the other two and can be expected to develop an emerging overlay of communications, networks and organisations among the helices' (2003, p. 112). They argue that the university has a role in economic development because of the changing nature of knowledge and economic production. Gibbons (2005) argues that a new social contract between society and the university is changing the way universities must engage with their community. He suggests that they will fulfill their contract through the 'joint production of knowledge with their communities' (p. 11). At the heart of his argument is the view that new knowledge will be developed

> by society speaking back to science. This will require better understanding of boundary objects which facilitate the development of common language, a dialogue at the boundary, not translation across to others and transaction spaces where all partners bring something of value (p. 10).

In these new 'transaction spaces' which are 'knowledge sharing and knowledge generating' the university is not the holder and transmitter of knowledge. The role of the university changes with 'boundaries blurred' between

- teaching, research and consultancy

- academics and students

- the university and external organisations.

Instead of being the 'creators, custodians and disseminators of knowledge, the university becomes one player in a network contributing to solving the problem (Dunkin 1999, p. 6). The student engages with education throughout their life with different requirements and the need to develop different skills and knowledge sets, at different times. Here the university connects with organisations and other institutions supporting learning across the spectrum and by linking strategic priorities for regional engagement with university activity. This type of interaction would include community regeneration, economic development, international exchanges, outreach, and new firm formation (for example Benneworth and Charles 2002, Garlick 2000, Goddard 2007).

The social discourse of lifelong learning explores 'social actors working and learning collectively in specific local sites across national boundaries' (Borg & Mayo 2005, p. 220). In this discourse there is a strong link to the humanistic discourse which includes 'learning for personal, civic, social and/or employment' and recognises different facets of human and collective being' (p. 211). Duke discusses the potential for the university to support this learning in developing his thesis on lifelong learning when he proposes a radical change for the university and an ordering principle for higher education (2001). He argues that this works as a principle on three levels:

Table 3: Ordering Principles for Higher Education

Macro level	System level	Diversity and complementarities between institutions addressing diverse needs—Implies seeing and planning higher education, less a free standing entity more an integrated element in social and economic management
Messo level	Institutional level	Change in clientele and mode of provision away from post school. Partnership with stakeholders in other sectors, private and public, supports valued new teaching and research (knowledge-sharing, knowledge-generating)
Micro level	Teacher–student classroom interaction	Learning with its related certification and licences is recurrent, spasmodic, renewable and lifelong implies permeative changes to curriculum and to notions of subject matter and competences

(2001, p. 18)

These three levels can be mapped to the typology of lifelong learning developed by Murphy et al describing 'in-reach' which 'prioritises recruiting potential students into the institution (at the micro level), 'out-reach typified by efforts to widen participation through partnership (at the messo level) and 'flexibility' which refers to structural arrangements such as the recognition of prior learning, transfer systems or the use of ICT (at the macro level) (2002). At the micro level this enables students to move into higher education through alternative pathways and alternative entry schemes where experience and knowledge are recognized. At the messo level partnerships with other organisations provide avenues for learning both for students and university staff but also potential partnership in research which addresses scholarly aims and local issues or puzzles. At the macro level societal issues are understood and policy developed supported by the range of educational and research resources available and the university has a role in developing the civic society. There are also arrangements for credit transfer across institutions and support for increased and flexible access through IT systems and programs.

There is considerable effort amongst many governments and universities towards this mode of operation for universities (see IMHE, AUCEA, eidos). Although there is criticism of lifelong learning policy for being 'driven by economic considerations ... it has been realised that these goals could not be achieved without concomitant social development to combat exclusion' (Osborne 2003, 7). However, current resources, reward structures and understanding of the impact of university activity do not support the role of the university in achieving this broader responsibility and local role widely (Gibbons 2005, Garlick 2002). For the university to have a key role in the learning region, and to support a comprehensive strategy for lifelong learning,

support and resources are required, as well as the freedom and ability to act to determine how the university will work. This would require 'systemic recognition of, and reward for, the connectivity and outcomes through teaching and research linked to the institutions locale' (Yelland 2006, Kitigawa 2002). The university and other organisations require the ability to partner and work with different levels of government and policy to address local issues and aspiration.

Governance

For a comprehensive strategy for lifelong learning and the development of the learning region there are fundamental changes required. One of these is the need to change governance structures and arrangements. The call for new forms of governance arises from the engagement of an increasing number of actors in the governance processes and an argument that there is a 'new governance' shift towards 'governance without governments' (Rhodes 2000, p. 353). Although there are many who disagree that the role of government is diminished as the discourse of governance becomes dominant, there is widespread agreement changes are occurring (Peters 1998, Weller 2001, Marsh 2002). Considine (2006, p. 9) provides the following typology of governance.

Figure 2: Governance

	Source of Rationality	Form of Control	Primary Virtue	Service Delivery Focus
Procedural Governance	Law	Rules	Reliability	Universal Treatments
Corporate Governance	Management	Plans	Goal-driven	Targets
Market Governance	Competition	Contracts	Cost-driven	Prices
Network Governance	Relationships	Co-production	Flexibility	Brokerage

He argues we are seeing a new 'institutional design', with the development of network governance through the 'extension of local governance partnerships into many areas of collaboration between public agencies and local community groups' (2006, p. 8). This is discussed as 'a new form of governance…focused on management by negotiation and horizontal networks, policy learning and organic institutional forms rather than traditional methods of hierarchical command and control or market models' (Rhodes 1997, Jessop 1999 in Reddel 2005). In a system of network governance rationality is bounded by

relationships between organisations and levels of government with roles and 'co production' negotiated rather than legislated or managed by government or contracted out to the market. It is appealing because it suggests connectivity between local organisations and levels of government with local influence on policy development and outcomes.

Local governance partnerships, however, raise issues which are structural rather than related to how the partnership functions at the local level. There are many drivers for partnerships and partnerships are not necessarily equal. Issues can arise with 'power and accountability, the capacity, fitness for purpose' and potential 'governance failure' (Geddes 2005, p. 27). Government is at arms length contracting infrastructure, resources and, in some cases, managing to the local level with varying degrees of influence. Geddes argues this entails risk, although Considine argues that this new form of network governance could confer significant collaborative advantage as partnerships are established to achieve local outcomes (2005, p. 18). Bennington and Geddes provide a tool to better understand these new forms of governance finding that to assess the capacity of partnership as a form of local governance one 'needs to analyse three dimensions: local capacity for partnerships as quasi-institutions (their cohesion, resources, structures and processes as vehicles for effective governance); the capacity of local level of governance in the context of the power of other tiers and spheres of political and economic decision making; and the capacity for social policy as a potentially progressive force within a capitalist economy' (2001, p. 6).

In a learning region, organisations work together developing governance partnerships with each other and government to deliver services and outcomes most appropriate to the region. Learning occurs across boundaries improving policy and governance and ultimately government and society.

Criticism of the Learning Region Concept

The learning region concept is used to evoke this ideal society—learning is easily agreed upon as a progressive and positive framework. There is criticism , however, that the concept is 'fuzzy' (Hassink 2001, p. 17). Lovering argues vehemently that this 'new regionalism' is 'vulgar, in the sense that it illegitimately assumes that abstract theoretical categories can be straightforwardly translated into real-world empirics…and it derives influence from its bold claim that it throws new and policy relevant light on real –world questions, but its vulgarity means the light it casts is quite misleading and policy outputs at best unfounded' (1999, p. 384). Lovering considers the regional approach as having been commandeered by the 'boosterists', resulting in unfounded glorification of region success stories and 'assistance to the dismant(ling) of national redistributive structures and hollow(ing) out the democratic

content of economic governance (p. 392). He makes a particular point about the lack of attention paid to the role and presence of the state in regional literature. He cites as an example Wales, where the growth in employment is through public sector employment, which is at 'more than twice the gross contribution of Foreign Direct Investment', and not, as the regionalists claim, the result of the 'renaissance of the manufacturing industry' (p. 382).

Markussen (1999) argues that the concept is fuzzy due to 'lack of theorising and … little good empirical work beyond anecdotes and case studies'. She also makes the point that politics plays a role and the concept may be fuzzy because 'it is more difficult to see clearly what a progressive spatial strategy might be under capitalism' (p. 880). This relates to the concerns that the neo-liberal consensus and global capitalism have undermined democracy and allowed free market ideology to dictate, resulting in a withdrawal of government activity, along with the public infrastructure, resources and regulation at the macro or national level, leaving local communities to fend for themselves (Breer et al. 2003).

Plummer and Taylor (2002) are also critical of the learning region and 'like theories' and suggest policy developed from theories of 'industrial spaces, learning regions, (and) clustering' use approaches, which are a 'blend of ideas on institutions, individual agency and social regulation that combine to construct distinctive local economies' (p. 633). They call this Institution–Agency–Regulation (IAR) and argue it 'builds explanations by layering contingency and complexity woven from opaque and stylised constructs such as social capital, institutional thickness, embeddedness and atmosphere' (p. 634). They take this up strongly in the Australian context where they argue for much better measures of the dimensions that might help to better inform policy:

- technological leadership at the enterprise level,

- knowledge creation and access to information,

- local or locational integration of small firms,

- infrastructure support and institutional thickness,

- the local human-resource base,

- the power of large corporations affecting structure and strategy,

- interregional trade and the extent and nature of local demand and

- local sectoral specialisation (p. 637).

Garlick et al argue that the 'current model of leadership and governance is not effective' and there is a need to 'facilitate an enterprising community capacity building agenda, based on

knowledge exchange, dialogue and learning, involving many stakeholders and networks over quite some length of time (2005, p. 17). His solution is that rather than small 'elite' governance groups compiling strategic plans that depend on subsequent government support as the policy model for regional practice' … 'an approach that fosters coalitions of expertise and interest among enterprising people on a wide front is a way forward' (p. 19).

There is a compelling case for increased attention to rigorous presentation of evidence and definition of the learning region concept to support better understanding, and potential policy solutions addressing sustainable development, the structural impediments beyond the control of the region, and local effects of global capitalism (Lovering 1999, Markusen 1999, Rainnie 2005).

In Defence of the Concept of the Learning Region

This criticism requires a response. The learning region concept is widely used and has different meanings for different groups in different contexts. However, the concept does connote an aspiration for something better; it is more than regional development. It brings together geography and economics but also adds concerns about a holistic and integrated approach to development: economic, social, cultural, and sustainable. Most importantly, it promotes learning and, therefore, change.

On the basis of the first four OECD case studies Kurt Larsen (1999) wrote that

> [a] common feature of learning regions is their determination to create globally competitive knowledge-intensive industrial and service activities and to base their work on the local capacity for learning, innovation and change. Lifelong learning lies at the heart of their formal and informal training at all ages and levels, as do the objectives of social cohesiveness and sustainability, which are central parts of development of any learning city or region.

The learning region concept has the potential to be a 'paradigm' that can be 'interpreted in a socially progressive manner' (Lovering 1999, p. 392). The concept of a learning region also includes a link to questions of national influence and governance with findings that 'devolved power to design and deliver policies attuned to region with supportive central state … can compensate those regions which do not have the capacity to experiment with their own institutional resources (Amin & Thrift 1995).

Change will most certainly require learning and that is the aim of the learning region research. This 'fuzzy' concept may not be as great a sin as Lovering suggests, as it takes up

the regional focus and progresses the discussion in useful directions Examples of this include the work of Norman Longworth with local government and learning regions (2005, 2006), the Observatory PASCAL (www.obs-pascal.com) and the many partnerships, projects, examples of best practice and local successes which support this effort globally as learning communities, learning towns and learning cities.

Learning Region Features and Typology

The Learning Region Features

The 'fuzziness' of the Learning Region paradigm results from the many features attributed to this complex concept. In the CRITICAL Research Project these features were articulated based on the literature and policy principles. These features are:

Organising collective learning processes of regionally embedded actors Regional learning is a collective process among the actors and institutions in a region. Their permanent exchange of information is a key input into regional decision-making processes. The tacit knowledge of the region is the accumulated knowledge of actors and institutions over decades or centuries.

Promoting permanent learning within regional organisations and networks
There is a need to continuously refresh, update and increase the knowledge of individuals as well as institutions, organisations and networks in the region. This refers, too, to the concept of organisational learning, hence to the capacity of organisations to maintain competence in an increasingly complex decision-making environment.

Establishing interactive innovative regional production clusters
The encouragement and formation of clusters of local competence has become the preferred strategy of regional economic development institutions. It is a crucial base for regional learning initiatives as it will reveal training deficits and directions for specialised learning corridors.

Improving local innovation climate
The openness of local milieus for innovation and learning is a key to the successful introduction of innovative learning initiatives. Consequently appropriate measures to improve the local climate for innovation and learning have to be identified and introduced. The regional media have a key role in such efforts.

Encouraging endogenous learning processes

The endogenous dimension of the learning city paradigm is important for achieving local synergies. However, it is not an easy thing to find an appropriate path between (tacit) local knowledge and external know how, when it comes to organising local learning processes for innovative development.

Enhancing the capacity of (Small to Medium Enterprises) SMEs for technological innovation

This is a traditional concern of local economic development. Regional SMEs using sophisticated up-to-date technology are indispensable for an internationally competitive local economy. And there is much experience of how to achieve it, once the firms are willing to co-operate.

Enhancing SMEs willingness to engage and co-operate in regional networks

Encouraging firms to co-operate in regional learning initiatives is not an easy thing. Unless owners and managers of SMEs can see the benefits of local co-operation they are quite hesitant to invest precious commitment, time and money in meetings and joint learning initiatives.

Removing institutional constraints hindering regional learning

The removal of local obstacles and constraints, which hinder or retard local learning is a never ending task of learning initiative advocates and moderators. Unconsciously, or just from fear of losing power and influence, local opinion leaders and established networks have a tendency to stick to their own value system and personal experience when it comes to judging innovation and changing directions.

Improving the skills of the regional labour force

Permanent improvement of skills in the regional labour force is a precondition for increasing productivity and to maintaining international competitiveness. This requires close co-operation of the private sector with state or self-regulated systems of professional training.

Integrating regional sectoral policies towards innovation promotion

Launching innovation programmes has become routine in public institutions at all tiers of planning and decision-making. Often such policies and related programmes are not well co-ordinated. A better integration of such sectoral innovation efforts into a comprehensive regional innovation vision could improve their efficiency and facilitate regional skill development.

Promoting lifelong learning

One of the key features of learning cities initiatives is to introduce the concept of lifelong learning. This is a challenge both for educational institutions and for individuals, who are permanently encouraged to update their knowledge and skills, as it is for employers, who, in their self interest, have to create opportunities for continuous training beyond training-on-the-job.

Organising and transferring information

Despite all efforts to provide easy access to information on learning potentials and opportunities in a region, there are still information deficits among regional actors and decision makers. Hence modern state-of-the art regional 'infostructures' have to be developed, installed and maintained with up-to-date information platforms and services.

These dimensions have been identified in numerous studies on regional innovation as the key components of successful regional (as well as city) development. Together, most probably, they would guarantee a region to be well equipped for regional competition in an uncertain future (Charles et al. 2004, p. 18). The features of the learning region were used to inform the development of a typology which was developed with the aim of becoming a 'practical' tool to support the building of a learning region.

The Learning Region Typology

This typology of a Learning City/Region is represented in Figure 3. It considers the 'categories' of learning initiatives as determined through the research project and in further development of the concept.

The work suggests that

> ideally the ultimate Learning City/Region Initiative is a combination of the four initiatives with the four pillars or sub-systems of learning in a city in operation in order to become a sustainable intelligent territory which is internationally competitive. Clearly, the four subsystems overlap and certain key actors may be active in more than one of the subsystems. Their role as bridge builders and communicators between the single sub-systems is crucial for knowledge building (Charles et al. 2006, p. 21).

Figure 3: The Learning City/Region —An Intelligent Territory of Knowledge, Learning and Co-operation

The Learning City/Region An intelligent territory built upon four pillars of learning initiatives	
1 **The Learning Co-operative** Development of learning and skill improvement among citizens and local labour force	2 **The Learning Cluster** Promotion of clustering of local Small to Medium Enterprises (SME's) and support agencies
3 **The Learning District** Formation of strategic alliances among local R& D Establishments	4 **The Learning Network** Co-ordination of urban development activities within city regions

Testing the Learning Region Typology

In this study the typology and features are tested as a tool to analyse data and to provide the answer to Markussen's question about the learning region: 'How will I know when I see it'? The data collected for the development of the case study of economic development project in the Northern Metropolitan Region of Melbourne is sorted and analysed through the use of the typology with the aims of

- testing the typology
- analysing the data
- collating data from across the region, thus preventing too much focus on one unit in the case study.

The Learning Cooperative

The Learning Cooperative initiatives incorporate 'development of learning and skill improvement among citizens and local labour force' and

> aim at assembling education related institutions and actors to join forces for better and continuous lifelong education of individuals in a city or region. Thereby the whole range of target groups in a territory is addressed, from primary school to senior citizens, from general basic education to continuous refreshment of active knowledge' (Charles et al. 2006, p. 23).

Education, training and skill development has been a focus since the establishment of the industry network. Access to education, pathways to employment or further education and training, increasing skill levels and technological education are important factors in the northern regional development project. NIECAP, the school based effort which was established at the same time as the industry network, has worked in partnership with the industry network and other organisations supporting numerous initiatives which cross into education and training networks, industry, social and youth services. This group is part of the university commitment to the region, and it has worked at both the strategic and at project level and accesses funding from a range of sources to build on the support of the institution and to engage new members and participants.

There is considerable effort across institutions in the region in areas which would be described as outreach activity; ' the proactive … efforts to widen participation and involve partnerships with … employers, schools and the wider community (Osborne 2003, p. 47). There is support from RMIT and La Trobe universities for academic programs to link secondary and primary schools. Examples include computer camps for girls, senior secondary school access to labs and primary and junior secondary school programs for space science and rocket making, the collocation of a secondary school with La Trobe University, a regional magazine for students about science and school partnership programs (Northern News, 2007). There has also been a focus on pathways development and the emphasis on vocational education and training is equally important and strategic. Examples include a project involving the establishment of two local secondary school and industry clusters to develop linkages between the schools, their industry, TAFE and universities to develop education and training pathways, work experience, developing understanding of career options and better understanding of manufacturing industries (NACC 2005). The Whittlesea Youth Commitment discussed in Chapter 5 is another example of this approach, and there are numerous examples of student projects, work experience and research projects undertaken with industry and community organisations and secondary schools, TAFE Institutes and Universities.

Another significant initiative from the NIECAP group involved partnership with NORTH Link/NIETL. This was a group formed around the Stainless Steel industry, cited a number of times in the study of the industry network as a community of practice. As discussed in Chapter 5, the Stainless Steel Reference Group was established by the NIECAP in 1999 to involve industry, schools and education providers in an 'inquiry into the circumstances behind the reluctance of young people to become involved in an industry that offers local employment opportunities with good remuneration and prospects for advancement' (Van Lint

2002). The group still operates but has changed its name to the Northern Stainless Steel Skills Development Group, to demonstrate their sense of responsibility for addressing the skills shortages in the region. Their achievements include the development of a specific training program in partnership with Northern TAFE, partnerships with schools and the LLEN and inkind plus dollar support for the Northern Technology Education Centre (NTEC) at Northlands Secondary College (NACC 2004).

There is support in this network for specific target groups with a strong priority on access and equity. This is framed by consideration of both employment opportunities in the region, skills shortages and industry needs, and considerations of disadvantage. At the state level there are initiatives which support this focus. These include the three LLENs covering the region and a northern Adult Community and Further Education region supporting community education across the region, including the provision of training to members of community service organisations in areas of management (DET 2006). This is leveraged through a university program to bring TAFE and undergraduate programs into Neighbourhood Houses and community centres targeting unemployed and disadvantaged learners. This has been leveraged again through partnerships with private companies and philanthropic organisations to support the acquisition of computers and communication technologies into Neighbourhood Houses with mentoring support programs to assist disadvantaged learners seeking employment and parents interested in supporting their children's learning (RMIT 2006).

A large project was initiated with funding from several sources, to support the development of lifelong learning in Broadmeadows, one of the most disadvantaged areas of the region. This project links the Hume Global Learning Centre with early childhood and primary, a middle school and a senior school with TAFE and university. The State government has responded with a major regeneration of all schools in this municipality (Hume City Council 2006).

The NACC and NORTH Link/NIETL are present in these efforts through crossover memberships in the LLEN, a Learning Centre in one of the LGAs and partnerships supporting refugee programs and work in East Timor, for example. The NACC also assists in development and supports funding applications for projects; for example a social enterprise to provide training and employment for people with disabilities, a community facility and a access programs for a migrant group, co-ordinating aged care employment for ethnic communities and improving indigenous employment outcomes (DOTARS 2006).

Considerable local energy has supported two initiatives aimed at continuing the focus on skills shortages and education and training. The Northern Schools VET cluster is an initiative

which co-ordinates the VET provision across schools to support wider choice and the development of programs which match the skill needs of the region (RMIT University 2006). This project is funded through a Commonwealth Government initiative under Careers Advice Australia and hosted by RMIT University. The Northern Technology Education Centre (NTEC) at Northlands Secondary School is an example of collaboration to achieve government support. NTEC aims to provide technical education to students from schools in the region in purpose built facilities with equipment provided by industry sponsors. It is now sponsored by industry, the LLEN, unions, TAFE and the universities and has won some funding from the Victorian government. Instrumental in its development was NORTH Link/NIETL, the NACC and Northern Stainless Steel Skills Development Group. In 2006, 160 students from twenty-six schools participated in VET programs at NTEC which offers engineering, manufacturing, auto electro technology, furnishing and horticulture. It is the lead in a cluster now working with the Victorian Department of Education which has reorganised secondary schools in the local area to include a senior campus to be established as a maths/science specialist provider in partnership with a university (Northlands Secondary School 2006).

It is in this category of the Learning Co-operative that the Northern Metropolitan Regional economic development project has the strongest performance. This is to be expected given the central role of education institutions, the priority given to development of pathways, industry skills, technological and engineering education and the history of the regional economic development project.

The Learning Cluster

The Learning Cluster incorporates the 'promotion of clustering of local Small to Medium Enterprises (SMEs) and support agencies.'

Clustering and agglomeration of enterprises as a feature of developing regional systems has occurred for various reasons; supporting the reduction of transaction costs of business, as a way of building institutional and social supports, and developing regional advantage (Scott 1988, Piore and Sabel 1984, Porter 1990). Initiatives to support the industry network and innovation are documented in Chapter 4 with a brief overview below. The features of the learning region suggest practices to enhance the capacity of SMEs in technological innovation and their willingness to engage and cooperate in networks would also be evident.

The case study of the industry network, NORTH Link/NIETL, demonstrates the key elements of this feature. The industry membership of over 2,000 companies is substantial.

Representation at breakfasts and attendance of tours are also solid, with generally from eighty to 160 attending breakfasts and tours fully booked three weeks after their announcement. Outcomes from the Business Excellence Program and Trade Start have been exemplary, with targets met, additional resources awarded and renewal of funding contracts. By 2007, 115 companies had achieved their export targets through Trade Start. The network has developed a diagnostic tool for business excellence and benchmarking programs to support business improvement, produced a number of publications and, through partnership with the NACC, the LGAs and NORTH Link/NIETL, established two general Business Incubators used by over 120 tenants and there is a clustering initiative underway with food manufacturing companies in two LGAs, Hume and Whittlesea.

State government initiatives have provided funding for specific regional projects, such as the communication program 'Melbourne's North—Best for Business which has run for three years with matching funds from the partners and the state government. A number of the projects have been funded through successive competitive tendering processes where the funding programs had no particular regional focus (although it might be argued they were successful because of the strength of the regional approach). Commonwealth funds and programs are applied in the region through the ACC, the Business Incubator funding and the Tradestart program. Companies gain access programs through, for example, the Action Agendas or AusIndustry (as described in Chapter 3). Members of the network participate in state and federal industry programs, and these feature regularly in industry breakfasts promoting programs to enterprises using local enterprises as case studies, where possible, and answering industry questions (NORTH Link/NIETL 2006).

These initiatives indicate the region has some characteristics in this category of the learning region; however, there is a lack of clustering support by sector and in supporting a greater focus on technology and innovation.

The Learning District

The Learning District category looks for indications of

> demonstrable formation of alliances across local R&D establishments [and] 'concerted efforts of institutes of higher education to liaise with knowledge industries with public and private research R&D establishments, and with local knowledge centred establishments of the private sector.

> The purpose of such initiatives is to increase the overall attractiveness of the knowledge complex in the city, which, as the city itself, has come under pressure to compete for image, research funds, and for international academic staff and

students. Together they aim to promote a local knowledge milieu with a climate of mutual and interdisciplinary learning and creativity where cross-institutional centres of excellence can flourish and foster sustainable creative milieus. To achieve their goals they form strategic alliances, to press the city for more investment in knowledge related infrastructure' (Charles et al. 2006).

The importance of research and development in the innovation process, the role of institutions in technology transfer and proximity of players for exchange underpins these initiatives. There is a history of work supporting this approach, which began with concepts such as the industrial district and the innovative milieux (Piore and Sabel 1984, Malmberg and Maskell 1988, Lundvall 1995, Storper 1997). This is also examined in the considerable body of work on the role of universities in their region and in community engagement (Gibbons 2005, Charles & Benneworth 2002, Garlick 1998).

In this region the two universities support the industry network and support each other's work with the industry network on what is described as a 'take your turn' basis. The two universities represented on the board each have a history of successful industry projects in research, consultancy and student projects which range from single student research projects, such as postgraduate students undertaking projects with enterprises, to larger projects, such as the Greenhouse Challenge Plus Support project (Greenhouse Office 2006) in which students work with companies to identify ways to save greenhouse emissions, the costs associated with implementing changes and the payback period.

Both universities supported the proposals for Business Incubators in the region and one university has a technology park and business incubator on site. However, beyond support for the businesses with infrastructure, some training and student projects there is, in the words of an interviewee 'little linkage to the university and research activity'. A key barrier to university interest in research and development locally is the predominance of SMEs and a lack of head offices of larger companies.

RMIT University has had a strong commitment to its role in the region. However, its principal city location means it was not dependent on success in the Northern Metropolitan Region. While La Trobe University was developing a greater commitment to its regions it has not linked its success to its location. In this case it was also apparent that this is a sub region of the city as both universities are members of the Vice Chancellor's forum initiated by the City of Melbourne which aims to develop a more co-ordinate d and collaborative university activity across Melbourne. Both universities have research links beyond the region and

internationally. However, there are no strong patterns of linkages in the region (Shepherd 2005), so neither would favour any region in particular, either nationally or internationally. This is consistent with Garlick's (1998) findings that university incentive systems do not support a particular focus on local initiatives.

Despite consistent university engagement in the industry network, initiatives in the category of Learning District are not strong. Activity relevant in this category is primarily focussed in areas of teaching, learning and training or community partnerships where students are providing the resource or where universities are providing in-kind support for industry breakfasts or expertise in working groups or on projects, for example.

The Learning Network

Although there were a number of examples of activity supported by the NACC and NORTH Link/NIETL which fit in the Learning Network category and involved the 'co-ordination of urban development activities within city regions' it was in this category that the very local nature of the Metropolitan Region Economic Development Project became apparent.

> In this category players engaged in urban spatial and economic, social, and cultural development policies and strategies are brought together. The networking activities bring city officials, planners, council members and representatives of the civil society together face-to-face. By co-ordinating urban spatial and economic as well as social and cultural development policies and strategies, by promoting or jointly lobbying for projects, they accumulate experience and improve institutional knowledge. The networks learn to communicate openly with the civil society as well as with the local and regional media, who eagerly monitor such networks. (Charles et al. 2006).

The NACC and the Industry Network were the leading examples of activity in this category. These organisations led and facilitated a wide range of activity and collaboration across organisations. Central to this effort was the establishment by the NACC of the Economic Development Working Group, which involved the Economic Development Directors from the seven local governments of the region. This developed a stronger network amongst the local governments and supported some smaller projects but there have been two important outcomes to date. The first was a research project taken up by NORTH Link/NIETL which aimed to identify and address the limiting factors on the supply and demand of office and commercial accommodation in the region. The findings were presented to government and development companies to inform planning, zoning and promotion in the region (Australian Research Group 2007). The second development was a Cultural Tourism Co-operation

project which was to link the attractions of the region and support 'intourism' (NACC 2006). A range of government departments have funded network projects and there was trust and respect for the network as evidenced by the initiation of a state-run program of industry tours based on the NIETL activity and Commonwealth amendments to the export development program. As the *Growing Melbourne's North* project garners support there is an expectation of a less piecemeal and project-based response to the issues raised in the region. The initiation of biannual briefings to local members of Parliament and the continued focus on providing stories and opportunities for local and other media were examples of the effort to engage actors with influence and to promote the issues and the work which was happening in the region.

State Government Neighbourhood Renewal projects involved community members in planning for their neighbourhood development and addressing issues with ongoing government support (see Chapter 3). Five of the nineteen Renewal projects that were operating at the time of this study were located in the Northern Metropolitan Region. State government programs were regular features of industry breakfasts and there was input from the network into the Manufacturing Industry Consultative Committee (MICC).

At the level of local governments there were a number of initiatives which brought actors across the region into projects. An example of this is a Victorian Community Building project in the City of Darebin. It developed twenty-eight projects following an extensive first stage of the project which consulted widely with the explicit aim of engaging communities across the cultures represented in the city. Initiatives included a local festival and neighbourhood days, the formation of groups such as the koori police liaison group, the trial of a Sunday bus service, a community jobs project, an intergenerational schools project, an advocacy group for public housing maintenance improvements and support for a youth service and leadership project (City of Darebin 2005).

A key finding across the network studies in the CRITICAL project was the importance of individuals who cross boundaries: 'bridge builders and communicators' (Charles et al. 2006, p. 23). In the Northern Metropolitan Region of Melbourne the community of practice framework highlighted individuals who led activity across the network, and revealed the depth of work done across boundaries to develop projects, extend the network, promote the vision for the region and develop the base of supporters and participants in the economic development project. This was further explored using Wenger's infrastructures of learning revealing that 'facilities' were made available to support the learning in the network and the development of new communities of practice (see Chapter 5). NORTH Link/NIETL and the

NACC 'provide spaces, support for projects through development, administration and management, documents relating to history, stories and also minutes and records, opportunities for participants to join and choose the extent of their involvement' and a leader to start projects (although that role may be handed on) (Wenger 1998, pp. 237-238).

The boundary crossers also made links to new sectors, contacts in new organisations and sought new participants. Granovetter discussed 'weak ties' and flows of 'unique and non-redundant information', which is more likely to transfer across weak ties to otherwise 'disconnected segments of social networks' (2005, p. 35). It is linkages through weak ties which extend the regional development project. Through media and events, projects, participation in committees and development of responses to local issues new participants and leaders are engaged.

The discussion in Chapter 5 on membership has relevance in this context. Also relevant here is the criticism that the common structure of regional development in Australia is 'elite groups' dependent on government funds (Garlick 2005). Analysis of the membership did not indicate a deliberate exclusivity although there were clearly some processes of selection. There was a priority on engaging key institutions and organisations, but no limit on members. NORTH Link/NIETL was also not dependent on government funds as it was primarily funded through memberships. This might have excluded some organisations from NORTH Link/NIETL but not from the NACC. The majority of projects undertaken by both agencies were sourced largely from government funding but there was often a mix of funds as well as self funded activity.

Communication was an important element in the activity in the Northern Metropolitan Region to attract participants and develop ownership of the regional development project. Having information and documentation underpinned this and was important in projects and the activities of the agencies. A fundamental objective in the development of the *Growing Melbourne's North* document was the ability to track progress as well as to have a basis for advocacy, to make the argument for a 'fair share' of Melbourne's resources. As discussed in Chapter 5, new projects, successes, the stories, project documentation, and the data which form the basis of measures of progress and project outcomes, were in the communications strategies of both agencies. This information was available on the NACC and NORTH Link/NIETL websites and publications. There was clearly an effort to have 'information organised and transferable to support regional actors and decision makers' and for the 'local media to play a role', although there was not the capability to develop 'state of the art infostructures' described in the learning region features. Linked to this was the review of the

Growing Melbourne's North project and the learning over the history of the project. As argued in Chapter 5 there was evidence of learning and change at the regional level.

There are very strong initiatives in this category which align with the Learning Network category. Initiatives in this category bring together the actors engaged in 'urban spatial and economic', as well as 'social strategies'. However, there was no significant presence of 'cultural strategies'. It was also almost entirely a network within the Northern Metropolitan Region and was not engaged across regions or across the city.

According to Considine's typology of governance this regional project only partially fits the networked governance description discussed earlier in this chapter (Figure 2) given the limited connectivity to strategy at state and federal government levels. Its underlying principle is that of relationships, as co-production delivers the outcomes through projects or activities to support the regional economic development project, and in Considine's words its 'primary virtue' is flexibility as the activities are determined by local needs and aspirations not driven by 'the system'. The agencies, NORTH Link/NIETL and the NACC were engaged in the delivery of services through partners—as both the brokers of activity as well as the organisations in brokerage arrangements with government. It was, however, a limited networked governance arrangement as partners were local and there was little partnership beyond the local governments and key organisations within the region. Other levels of government supported projects but were not engaged in the economic development project, the aspirations of the region or a strategy which incorporated regional economic development.

In assessing the local governance partnerships according to the challenge set by Bennington and Geddes (2001) earlier in this chapter it is possible to suggest that the two agencies studied in this project had the capacity to behave as quasi-institutions given the cohesion demonstrated through their organisation, structures, infrastructures of learning, and resources available to the economic development project. This study suggests they were 'potentially a progressive force' as the project aimed to improve education and training, address disadvantage and unemployment issues and develop a more prosperous and cohesive region. However, they were limited by being a sub-region, removed from decision making because of the lack of government approaches which incorporated local knowledge and activity through the regional development project.

Analysis

Using the typology proved to be a fairly efficient and straightforward exercise in sorting data.

There was some overlap but categories were clear and bringing the data together under each category gave a sense of the performance in the area. It was also reasonably obvious where there were weaknesses and strengths. This exercise would support the inclusion of the features, as they highlighted aspects within the categories and ensured consideration was given to the complexity and diversity of regions.

The typology and its features do not have a focus on activity which supports environmental sustainability or social cohesion. Findings from this study suggest these should be included as they might be discernable in each of the categories but should also be more explicitly included in the features of the learning region.

The analysis of the Northern Metropolitan Region using the typology and its features was useful. It highlighted areas of strength and weakness as well as points where other levels of government interacted. Using the typology highlighted the role of the university and demonstrated their major input was in soft infrastructure, and largely through the teaching programs and community partnerships approach rather than research and development. The typology also highlighted the very local nature of the project.

The typology was used to answer the question 'Could the Northern Metropolitan Region be a Learning Region?' There were strengths and some characteristics in each of the categories, but the Learning Network category which identifies actions which refer to co-ordinated urban development activities indicated that the project was very local in nature.

Discussion

In the development and analysis of the case study of the Metropolitan Region Economic Development Project a number of factors and issues arise which are particularly pertinent to this study, are potentially interesting to other regions and are informative in the development of theory. These issues have been mentioned previously but are discussed in some detail here to pull together the findings and discuss the theory of the learning region.

The Region

The most obvious problem was how to define a region. Australia's settlement pattern features large capital cities, urban sprawl and sparsely populated rural regions. The presence of three levels of government with no coherent system for regional boundaries and a tendency to use 'region' to describe rural areas, complicated the definition of region.

This is not a problem unique to Australia, and in the international context there is work underway to develop 'standards' to establish the definition of the city region. This is based on

a 'core, established by either population density or job density and a commuting field' to 'compare cities and assist in policy development, city forecasting and planning' (Freeman and Cheshire 2006, p. 1). The Melbourne 2030 strategy defined a commuting field but implementation issues (see Chapter 3) have meant this has had little impact on useful work on the city region in this study. The OECD case study of the Learning City Region used Melbourne and Victoria.

The definition of the Northern Metropolitan Region of Melbourne has evolved, as it has been influenced by government approaches and policy. The definition has been left up to the region to determine, and this is largely done by the agencies and interested local governments with accommodation to government policy and programs such as the current matching to LLEN boundaries. This became more formalised when the research was done for *Growing Melbourne's North* and the need for better measures became more pressing. There was increasing awareness of the need to understand progress and have the data to strengthen the position for influencing policy and programs at different levels of government.

Taking the Northern Metropolitan Region of Melbourne as a sub-region or region in its own right raises the issue of scale as well as relationship to the city region. Garlick (1998) states:

> Regions are small enough for communities to have meaningful input and influence on the economic development process and community members are more able to see the results of their collective efforts. Regions are also small enough to have a degree of specialisation in their economic development focus and are able to change focus in response to wider changing circumstances and community priorities. At the same time regions are large enough to provide a platform of specialisation support in the context of the global economy and 'lend themselves as ports of entry to the global economy' ((Ohmae in) and Garlick 1995, p. 106).

The *Growing Melbourne's North* document provided the rationale for the Northern Metropolitan Region as an economic region. Interviewee comments regarding the size of the region in this study concurred. For example, an interviewee claimed 'it is a manageable size, large enough to have some critical mass and important industry but on a scale which, through the network it can be covered, well, never perfectly, and we always want more resources and more people involved ... ' Another interviewee who had been involved in a Neighbourhood Renewal Project in Broadmeadows (see Chapter 3) noted that 'to change people's lives and how they think, you need to work with a neighbourhood and that is hard enough, but for the kind of economic development we need, the region has to bring

neighbourhoods together, developing a larger scale activity, involving our communities, and getting the attention we deserve from government.'

Boosterism

Lovering raised the issue of the 'boosterists' using isolated examples to promote the region to support development and supporting an industry of consultants and regional development projects. This was an ever-present issue in a competitive environment. The promotion of the region and the work in business attraction was an element of tension in the NORTH Link/NIETL network for those involved in the early establishment period. It was also related to the conflict over the merger of NIETL and the REDO- NORTH Link (discussed in Chapter 4). It was expressed as concern about losing sight of the importance of the manufacturing industry and regional development becoming more about promotion. The economic development project aimed to develop local skills, expertise and opportunity based on success in the local industry, not to 'import other people and their business and sell the region' (interviewee).

It was also expressed as a concern about the delicate balance between lobbying government but also requiring funding from them. Many saw the lobbying role as advocacy for better conditions in the region and for a 'fair share' of Melbourne's resources. This is potentially a politicised role in conflict with the need to win government projects. NORTH Link/NIETL has had a solid reputation with government and has been well positioned in funding for projects and from programs at both state and federal levels. The organisation has depended on project funds to supplement membership fees but it was also through projects that the majority of services to members were delivered. As discussed, a bi-annual meeting with the local members of parliament was established and this was a new way of interacting with government, as it engages very directly with members of parliament where previously most work had been through and with the members of the bureaucracy. Also at the time of this study NORTH Link/NIETL was invited to be a member of the Committee for Melbourne, thereby becoming a member of another group with agendas for government which may be quite removed from the work NORTH Link/NIETL has been engaged in previously.

Finally, there was importance in the promotion and resources devoted to publications, events and news coverage. As discussed in Chapter 5, the argument for this spending was about pride in the region, changing people's perceptions and building an identity. The most vehement criticism is that the network had 'sold out' and was more concerned with promotion than with programs. There was, however, no program glorifying the economic development success of the region in the way described by Lovering (1999). The closest example was the

Best for Business program, as discussed in Chapter 4, which changed from a marketing exercise for business attraction to a more strategic effort supporting the development, publication and promotion of *Growing Melbourne's North.*

Measures

Understanding success, understanding where efforts should go, making a case and identifying how successful programs have been, all require some way of measuring outcomes. The *Growing Melbourne's North* document and strategy grew from the first stage of research which aimed to present the profile of the region. The Executive Officer of the NACC said that 'the profile just raised more questions. The more information people had the more they needed to understand the implications and what they could do to act on it'. The next stage was to build on the research to provide a 'catalyst for discussion, strategic thinking and formal policy and planning processes' (Shepherd 2003, p. 13). As discussed in Chapter 3, the document provided the strategies, measures and benchmarks for the regional development project. In the discussion about measures the document states that

> the strength of a region's economy is often measured by the level of economic growth or the increase in its level of production, and is often compared with the performance of other regions…This is a classically narrow view of the world where the impact of different starting points is dismissed. …Adoption of a growth-based paradigm of measurement restricts the application of a genuine vision for a community's future. If only growth is considered, especially short term growth, it is exceptionally difficult to argue for long term structural changes in the economy (p. 13)

It recommended the strategic plan provide a framework for stakeholders to work collaboratively, to seek commitment from all levels of government and to make increased employment in manufacturing a central goal (Shepherd 2003, p. 92).

The data on the region was analysed using a tool developed by the National Institute of Economic and Industry Research (NIER). The analysis was developed from indicators based on the regions employment strength or productive capability and came under the following headings:

- Households—high-skilled residents, exposure to low skills, non job readiness
- Workplace skills—21st century skills, skills sustainability
- Capacity—manufacturing, retail, government/education, business services
- Local economy—creativity, employment generation ratio, local employment capacity, high tech capacity, power employment

- Outcomes—productivity, labour utilisation

- Occupational balance (comparison of skills available in resident population and skills required by employers)

- Opportunity cost of travel (Shepherd 2003, p. 45).

The strategic plan then recommended the Northern Region economy aim for the following benchmarks by 2015:

- A business services sector with a size comparable to the region's share of the metropolitan population

- Local employment in the government and education sector comparable to the region's share of the metropolitan population

- A net exporter of education and training employment

- A significant net exporter of personal services output

- The shortfall in the regional share of metropolitan retail employment reduced to zero

- A clear dominance in the level of advanced manufacturing maintained

- By 2015, the total employment in manufacturing in the northern region should be 100,000, a growth rate of 4.1% per annum (Shepherd 2003, p. 90).

Finally the document highlighted emerging trends that should be considered in strategic planning. These included the 'emerging integrated economy' in another region of Melbourne, the establishment of the Synchrotron which could 'lead to new manufacturing processes' and the emerging biotechnology industry (p. 96).

The review of progress was scheduled for 2008. Discussion focused on how the intangible outcomes from projects would be captured and how the successes would be measured when they may not have been 'on the scale of the region but have made a difference to a life and someone's future' (interviewee). Questions asked included;

- If there was no improvement in the base data and no movement towards the benchmarks, has the regional economic development project failed given the successful projects which have made a difference?

- Do we understand how long it takes to be able to measure the impact of, for example, the move of the wholesale market, or the mentoring program which supported no more than twenty young people at risk per year?

- Can we understand what other forces influence these outcomes?

It is difficult to quantify what organisations, enterprises and institutions have gained through collaboration, research-based responses and support. Individual respondents claimed improvements in their organisations or in enterprises also export and innovation. In addition individuals identified improvements their own work because of the activity supported by the agencies and through exposure to new contacts, ways of working, opportunities and knowledge. The co-ordination across the region and the advocacy for the region were also difficult to quantify but were visible through media, network activity and projects. Also difficult to separate and to measure was the contribution the university has made in the project. Given its support for the building of networks, policy research, development of the model and the action research approach it is central to the project, in addition to the practical involvement in projects where in kind and financial support has been critical.

Measuring impact has been a concern of the institutions involved, local government and the agencies. This has in part driven the communications strategy of the groups as there is acknowledgement that many of the outcomes are difficult to quantify or to link directly to programs. Research has played an important role both at the level of the region, and at project level. The availability of statistics on young people in the City of Whittlesea was critical in the WYC project, as were calculations of greenhouse emissions in the Greenhouse project, and numbers of companies and export dollars achieved in the Tradestart program. However, these numbers were perhaps more useful in persuading potential participants to join or used as reportable outcomes from projects rather than measures of the economic development project.

There was a focus on these issues, and an update on the *Growing Melbourne's North* report planned and the agencies will look for improvements in the region, areas to target and progress towards targets set. There is, however, no widespread belief that the local agencies had the control to address many of the underlying problems, that changes brought about by the agencies could be linked to positive outcomes for the region or that the local impact from projects would bring improvements to the overall situation. Without a paradigm shift in the western world and the policy settings in Australia, there is unlikely to be really useful measures while success is judged by economic growth and not economic, social and environmental goals together (Parkin 2005).

Politics and a 'New Space'

The learning region challenges governance arrangements and the local and political nature of the work requires an awareness of political influences. In the findings from this study

politics is an inescapable fact of regional development activity. To some degree in this study people accepted that the politics of any situation is inevitable and the most effective way of dealing with this is to be well prepared. The model developed involves engaging partners, having the local research and background information to back up the arguments, and supporting the development of a plan to work towards a solution. There is a belief that a good brief on the problem provides a clear direction and reduces the politics at the local level at least. Also important is having the partners and collaboration in the region. The agencies have been strategic in ensuring key organisations were included in the networks and in developing ways for these organisations to work together.

Considine (2006) asked if we are seeing the signs of a form of network governance which was a 'new space between the old dichotomies of state and market, public and private, local and global'. There may be signs but no definitive move in that direction in the Northern Metropolitan Region. A number of interviewees suggested that there was greater freedom and greater space to explore, to develop and to support a range of activities in the past, although this was possibly because of the excitement in the establishment phase and the initiation of something new. There were also fewer restrictions associated with the use of funds. A number of those interviewed pointed to less freedom within organisations, less discretionary resources and less flexibility in work coupled with greater accountabilities to government and funding bodies which interfered with action in this potential 'new space'. Critically the partnership is strongest at local government level. Partnership in the words of one interviewee 'is more than project funds and measurable deliverables which are primarily the basis of our relationships with State and Federal departments'.

Partnerships with government however are also critical because the NACC and NORTH Link/NIETL were not elected or representative organisations. As discussed earlier in this chapter, they were not necessarily inclusive, representative or accountable to the society they believed they were working for. The NACC had a charter and were required to have representative practices, and funding applications for the Regional Partnerships programs had to be consistent with the regional strategy. This proved to be a fraught process, as discussed later in this chapter, but at the local level assisted in supporting significant initiatives involving diverse organisations and extending the project. NORTH Link/NIETL have had accountability to their member organisations who pay membership fees and to government according to project funding obligations.

Both organisations were accountable in many projects to the governments who funded them, but the operation of the agencies raises issues of 'power and accountability and 'the

capacity, fitness for purpose' (Geddes 2005) given neither agency existed through any democratic process. They continued to operate with limited connectivity to government beyond the local area which might have equally resulted in parochial, exclusive and potentially self-serving activity by a select group of organisations or individuals. In this case the approach taken by this group of people has broadened the base and included a wider range of organisations and individuals in the economic development project, but it still gave them considerable influence over who is involved.

Commitment

This raises the issue of how participants were selected and why they were committed. It was important in this network that the individuals were committed, but it was equally important that institutions and organisations were represented and committed. The legitimacy of the project rested on the key institutions being engaged. Also if there was no organisational support for the participants they could only engage in areas where there was obvious advantage to their individual position. There is an argument that individual participation ensures the network continues to deliver because it is driven by the individuals who require a return on their investment in the region' (Fine 2001), however, this can lead to a focus on short-term goals and to those projects which meet the objectives of the individuals.

As discussed previously, the agencies support approaches which share and moderate costs and benefits across stakeholder organisations. They also have a reputation of professionalism and an aim to have the respect of government and the public. There is an explicit aim to have a high level of public and government awareness of activities that celebrated stakeholders, as this attracted the key organisations in to the project but also make it difficult for organisations to pull out. However, the findings of this study suggest that commitment to this project is driven strongly by the ideals of the many people who engage with the projects and work to solve the issues.

The Northern Metropolitan Regional economic development project demonstrated a commitment to building a 'better society.' The agencies have been very successful in bringing others into the project who can find a 'joint enterprise' and 'mutual engagement' in the effort (Wenger 1998). This may well provide some insight into the scale where people can engage and believe they can make a difference and where a focus on integration of policy and programs might be effective. The frustration for the many dedicated proponents of this project was the difficulty in achieving recognition for the northern regional development project.

Epilogue

This study may well prove to be the study of an era which is about to end. It began at a time of dramatic change, with a crisis and a catalyst for action which brought people together in the Northern Metropolitan Region from industry and education. They formulated a response that has lasted and expanded.

The work they initiated began with a focus on supporting the development of the manufacturing industry through enterprise support alongside training, science and technology education in primary and secondary schools, as well as educational pathways, with the long term goals of ensuring local employment and prosperity. The aims and approaches have broadened and become the regional economic development project *Growing Melbourne's North.*

The region at the time of writing was facing changes on the scale of those which initiated the project. Their changes would have considerable impact on the agencies and networks engaged in *Growing Melbourne's North*. Most significant and frustrating were changes to the NACC. DOTARS having been under scrutiny for 'pork barrelling' through the 'allocation of Regional Partnerships funds to marginal seats' was reviewed by the National Audit Office and assigned a new minister, the deputy leader of the National party (Senate Inquiry Dec 2004). The new minister determined that Melbourne ACC's were more costly than they should be and proposed a single ACC for Melbourne. When unsuccessful with this proposal the decision was made to abolish the CBD ACC and merge the Western and Northern Metropolitan ACCs and leave the Eastern and Southern ACCs as they were.

The operating budget for the amalgamated North and West was reduced to less than the total the two organisations had received, with the additional area of the CBD to be covered. More critically this amalgamation reduced the level of service possible in a region which, according to the ABS Socio-Economic Index for Areas (SEIFA), is the most disadvantaged region in Melbourne and one of the most disadvantaged in Victoria. This region now has seven of the eight most disadvantaged LGAs in Melbourne and the largest concentration of disadvantage with 621,610 persons living in thirty-two postcode areas classified as disadvantaged (NWACC 2007).

The Northern and Western ACCs worked together to determine how to manage this transition with the least disruption and proposed that the two boards remain with an executive group drawn from both, and both executive officers continue to be located in their

respective regions. This was not the plan proposed by DOTARS and may not be supported in principle or may become difficult to support within projected budget allocation.

Concurrent with this changing political context are the changes to higher education generally and those at RMIT specifically. With the review of higher education, the opening of a discussion about third stream funds which might support university community engagement and changes underway in research measures provided hope in the region for better settings to support the continued commitment of the universities in the regional economic development project. The agencies have been very well supported by the universities which have taken key roles in the project, however, as outlined in Chapter 3, no priority or funding program to support this work has emerged from this discussion. There was a strong sense in the region that the education institutions were under duress and pressure to perform, particularly in research, and this would be likely to weaken support for the regional commitment.

The leadership at RMIT has changed and there is no longer a specific or targeted commitment to the Northern Metropolitan Region. The strategic plan described RMIT as 'a global university of technology with its heart in the city of Melbourne' (RMIT 2010, Designing the Future). The group with responsibility for the program which supported activity in key regions became divided and located in different areas within the university and was no longer working within the framework of university community engagement.

There were, however, strong indications that, with its industry priority, RMIT would continue its NORTH Link/NIETL membership. Also La Trobe University, which has a number of campuses, made community engagement a greater focus in its strategic plan which stated it would be 'advancing communities through the excellence of its learning, teaching and research' and that it has 'a strong sense of place and responsibility' (La Trobe Strategic Plan 2007).

Finally, as discussed in the postscript in the next chapter, a change of government at the Commonwealth level following elections in November 2007, altered the prospects for the ACC program within a policy framework of regional development.

Conclusion

This research concludes that significant learning and collaboration has occurred in this region through the regional economic development project. The typology was used to identify a reasonable to high level of activity and in different types of learning region initiatives. This

project has resulted in

- sustained effort supported by two agencies, NORTH Link/NIETL and the NACC in the development of the region and networks

- numerous successful projects addressing local issues and attracting funds from state and Commonwealth programs and other funding bodies

- a model for projects which is based on research, collaboration and partnerships

- significant contribution from the university supporting knowledge generation, lifelong learning, and the agencies and projects

- a learning infrastructure which supports learning in networks and the development of communities of practice

- engagement and commitment across organisations and sectors

- a reliable trusted source of information and business improvement for enterprises

- development of management and export capability in enterprises, and innovation

- some improvements in state and national programs based on experience in the region

- a number of significant gains for the region as described, for example pathways into education, training and employment for disadvantaged young people, the relocation of the wholesale market, potential for improved zoning and opportunity for office and commercial development and improved management of greenhouse emissions in a growing number of enterprises and organisations in the region.

The Typology and Features of the Learning Region have proved to be useful tools supporting the assessment of the characteristics of the region. Measures and understanding impact remain difficult issues. However, data and measures which support understanding of issues and assist in the development of solutions are critical.

Findings from the case study of the Northern Metropolitan Region of Melbourne are relevant to key stakeholders in the project and have contributed to the strategic development and planning for NORTH Link/NIETL and the NACC. Communication and a focus on local media have been very important in the project and support recognition and celebration of the work, raising awareness of the issues and the development of a regional identity.

Support of key organisations and universities underpinned activity which grew to be central in the project. A high value placed on learning, the action research approach which resulted in the model for projects, expertise supporting research and knowledge of policy are unique

contributions from the university. Although university support was not found in the innovation and technological linkages to enterprises the support for the networks and outreach activities were important contributions.

The region is a sub-region of the City and the partners in the regional development project were the local governments, organisations and the NACC and NORTH Link/NIETL. It is interesting in terms of the scale of the project and the strength of engagement. The project was successful as measured by the typology but required support and connectivity to a city wide strategy to be part of a learning region. Chapter 7 presents the findings and contribution to the development of the theory of the learning region.

Chapter 7

Conclusion

Chapter Summary

This chapter summarises the core argument of the study. It presents the findings about learning, discusses important implications for key stakeholder groups, including industry, universities and government and develops the learning region theory. This is followed by an epilogue which picks up the story from the postscript in Chapter 6 and concludes on a more optimistic note with the acknowledgement that the development of a learning region will always challenge but can also inspire.

Introduction

This research concludes with a degree of optimism for the regional development project in the Northern Metropolitan Region. A change in federal government at a critical time in this region's history allows for a postscript to this study that suggests better prospects for the NACC and a policy context which promises more for regional development.

The economic development project in this region was based on an approach which supported learning. Key elements of this approach were

- a strategic plan for the region as an integrated economy published as *Growing Melbourne's North,* communicating an assessment of the region with a vision for its future and engaging key organisations

- collaboration between the lead agencies, NORTH Link/NIETL and the NACC with a shared vision for the region, supporting new projects and linkages across sectors

- communities of practice and the facilities to support learning, conceptualised using Wenger's frameworks (1998)

- a model for projects based on research, collaboration and partnerships.

Without a commitment at different levels of government to regional development the projects and the rich local knowledge in this region could not be connected to strategy at city, state and federal levels. This was only possible through projects and isolated policy initiatives.

The typology developed in the CRITICAL project and tested in this thesis identified the

characteristics of a learning region exhibited in the case study. The use of the typology advanced the analysis of activity in the Northern Metropolitan Region of Melbourne and the development of the learning region theory.

Argument

The thesis began with the question: 'Is there learning and innovation in the industry network and if so how does this occur?' The answer is that learning supports innovation in small to medium enterprises in this manufacturing network. In understanding how learning occurred it became apparent that there existed a regional economic development project being driven by two agencies, the NACC and NORTH Link/NIETL; the industry network was only part of the picture. The model which underpinned the work was based on research and collaboration, and partnership.

The question became: 'Why is there learning across networks, and what is going on that links these successful projects?' The regional economic development project was supported by the strong collaboration of NORTH Link/NIETL and the NACC which provided the 'learning architecture' supporting learning across the region. There was a central community of practice which brought together a group of people from across the networks and supported new ideas and participants. The use of a Learning Region Typology (Charles et al. 2006) helped to answer the question which grew from this work: 'Did the Northern Metropolitan Region have the characteristics of a Learning Region?' and highlighted the role of the university. It was also important that the region is a sub region of the city and metropolitan area.

This thesis argues that for learning to occur it must be supported, be an explicit aim and built into projects and work practices.

Learning

This case study provided data on how learning was supported and encouraged, and on learning processes in networks. Interviewees placed a high value on learning, and they were comfortable discussing it. Learning was defined as changing ways of working or doing things, and developing new perspectives from exposure to other perspectives or experiences. Considerable value was given to bringing people together from different sectors and organisations who would not normally work together to discover they have 'different parts of the same picture' (interviewee).

The Communities of Practice Framework

In this thesis the community of practice concept was used across agencies to develop an understanding of learning as a social process in networks. Based on the findings of this study, this is a powerful framework with potential to support both the understanding of other case studies of regional economic development and to support the development of learning regions.

This study found the use of the framework made discernable important aspects of the regional development project. It highlighted learning processes and provided an accessible concept to support a discussion about learning. It also revealed a community of practice with members drawn from NORTH Link/NIETL, the NACC and others in the region who also had a role supporting the learning approach.

Interviewees could clearly identify with the characteristics of a community of practice and this assisted the gathering of data. Although it should not be assumed that a community of practice is positive, in this case study participants from the groups that exhibited its characteristics did talk about positive learning experiences, transformative in many cases, and change and innovation in projects and organisations.

A Learning Approach

In interviews with industry network participants, two aspects of their experience in project groups were highlighted consistently:

1. Some of these groups demonstrated the characteristics of communities of practice

2. Interviewees could identify learning across the network and highlighted two projects as typical and significant in a discussion about learning in the network.

Through examination of these projects in the context of the regional economic development project in Chapter 5, the approach to the regional economic development project developed by the NORTH Link/NIETL and the NACC became apparent. The agencies shared the ownership of a strategic regional economic development project and engaged key institutions, organisations, enterprises and individuals in different ways.

In Wenger's terms, there was a design which built the architectures of learning to support the development of communities of practice. The agencies and the universities worked together to implement 'architectures of learning' including the 'facilities of engagement, imagination

and alignment' as explained in Chapter 5 (Wenger 1998). This included bringing people together around joint tasks, establishing groups which took ownership of local issues and solutions, supporting a history and common approach with tools and documentation, and having individuals who crossed boundaries and supported project development. It was also about providing the events, meetings, meeting places, administration, project management and the ability to enter into contracts for funding. There are many examples of the facilities of learning as described in Chapter 5 and these included the working groups, projects and events which mark launches and outcomes of projects, the industry breakfast meetings, tours of industry sites, newsletters, media stories and a magazine. These occurred continually to enable individuals and organisations from across the region to engage with the network and the regional development project, to highlight and promote activities to raise the profile of the activity and the region, and attract new participants.

The Model

The model underpinning the regional economic development project and the development of projects was based on research and engagement of stakeholders. It started with the identification of an issue, supported by background research on the local implications or circumstances pertaining to the issue. This information was used to identify potential stakeholders and to engage them in the conceptualisation and development of solutions. This involved discussions to identify and then develop the collaborative or partnership activity needed to support the desired outcomes. This might also have assisted in applications for funding as the key stakeholders were engaged early in the process and a strong case was built. Interviewees emphasised the importance of background research and the development of joint understanding between different stakeholders at the local level, as critical to ensure ongoing project commitment and sustainability.

Some of the projects that have been developed using this model did not move beyond the initial stages. Others lasted for the life of the project, determined by funds or the project plan. Not all projects resulted in communities of practice. In addition to the regional economic development project, two examples which have lasted for more than ten years, namely the Whittlesea Youth Commitment (Chapter 5) and the Northern Stainless Steel Skills Development Group (Chapter 6), were examined in this project.

Findings for Stakeholders

Industry

For local industry, this study established that there were significant outcomes for some

enterprises through involvement with the network projects which benefited their business and led to export and to innovation. It was also clear that the network was a reliable source of information and contacts for industry.

The combined functions of regional development and of supporting the industry network were compatible but this appeared to be dependent on strong integration with the work of the ACC. This was a powerful partnership and leveraged the strengths and opportunities from both organisations in supporting the objectives of the regional economic development project as discussed in Chapters 5 and 6.

In the Northern Metropolitan Region the support for enterprises was the beginning of this project. Place has been important in this approach with an explicit aim of developing local skills and opportunities by supporting schools, education and training institutions alongside the development of the manufacturing industry in the region. However, the members of the industry network did not identify strongly themselves with the region.

There are a number of elements in the program which involve industry in more inclusive and integrated regional development activities and bring significant benefit to the region. These are:

- An approach which involves personnel across levels of enterprises with schools, educational institutions, government and other organisations and therefore develops understanding of differences between sectors which has supported projects across sectors

- Programs which introduce young people to industry and bring greater awareness of the issues faced by young people and more inclusive approaches which provide opportunities for disadvantaged young people and assist in addressing the skill shortages

- Projects which engage industry in issues of the region and develop a commitment to addressing regional issues

- A successful industry network which has strong industry ownership which has impressed government and enhanced the status of the network, raising the potential for additional funded projects, which needs to be balanced with the network's increasingly important advocacy role.

Industry value their engagement in the network and these elements support their involvement in issues beyond their own enterprise development. Their engagement,

however, starts from benefits to their enterprise. Although the sample is small it matches findings in Europe and the US that it is beneficial for enterprises to engage in networks to stay up to date with industry developments and to focus first on developing management and export capability to support innovation.

Universities

The findings of this study support the position that universities can play an important role in their region and in the development of civil society and social capital (Winter et al. 2006). There was significant in kind support and participation in projects and an important brokering role from the universities. Leadership, research expertise, student projects and pathway opportunities, access to expertise and resources in specific disciplines were all important aspects of university engagement in the regional development project. Through the university engagement there was collegial support and assistance in developing expertise which supported individuals working on projects and enhanced their skills.

For the study of university engagement this thesis provides further evidence that a regional role is powerful. With no systematic reward or incentive for universities to engage with their local region the activity is entirely dependent on university strategy, commitment and a long-term view of return. In an increasingly competitive environment with prestige driven by research rewards there is no incentive for this work beyond some areas of commercialisation and these are not tied to any requirement for local responsiveness.

Governance and Government

This case study demonstrates that local governance arrangements can be powerful. The characteristics of network governance through co production, relationships, flexibility and brokering are evident as discussed in Chapter 6. NORTH Link/NIETL and the NACC engage key organisations and committed individuals across a range of activities. They provide the facilities of alignment which enable the common focus, the model of operation, the policies, and flexible contractual and administrative arrangements. The number of key organisations involved is important and this has lessened the risk to the agencies if an organisation pulls out. It has also ensured a greater obligation as there is a high level of government and public awareness. However, this study did not find these organisations could act together in a 'new space' (Considine 2006) without connectivity to a city, state or federal strategy which supported regional development and planning as discussed in Chapter 5.

The research raises questions of legitimacy and roles for organisations within a democratic framework as discussed in Chapter 6 but finds that new forms of governance are working at

the local level. It may be that this local 'partnership governance' supports the development of 'enterprising human capital' in the way it distributes leadership through projects and networks, supports new leaders in projects and provides the potential for members to learn through engagement in a community of practice.

There are few government incentives or support for networked governance. Local governments are supporting members but may not see the need to participate or take the lead especially as they have minimal funding and few policy levers in the areas of greatest need or aspiration. The federal government funds projects or programs on a competitive basis. It also provides the funding for the ACC but does not link the regional approach to other Commonwealth Government policies or programs. At the state level there has been some alignment of boundaries and increasing attention to place-based approaches and understanding of the local effort. The LLEN are an example of this even with the difficulties experienced in this region.

Policy learning from the work in this region seems to be only possible in specific government programs such as industry visits (state level) or greenhouse projects with the university (federal level). These are treated in isolation as best practice and not translated more widely into policy or into an understanding of the activity in the region.

Theory Development

The findings from the case study have been used to inform theory not to generalise the experience of this region to another. As an abductive research strategy was used theory 'takes the form of ideal types generated from everyday concepts' and is developed in an 'iterative process' throughout the research (Blaikie 2000, p. 180). The questions in the thesis were focused on how and why, leading towards theory development. The typology was important in the development of theory as it provided the tool to identify characteristics of a learning region, identify gaps and answer the question: How will I know when I see it? Theory development started in this thesis with the awareness that the industry network was not a stand-alone initiative.

In the learning region networked governance structures support collaboration. This study adds to the theory that collaboration across the industry and the regional development network provides support for innovation in enterprises and in social projects engaging cross-sectoral support for regional development. Through this collaboration committed individuals from key organisations and from different sectors bring their perspectives to issues and develop solutions. The networked governance structure provides the framework for

collaboration and learning supported by the 'infrastructures of learning'. This study also supports the theory that in a learning region connectivity across different levels of government where policy and programs intersect is critical and needs to be supported by the institutional environment of the nation.

This thesis adds to the learning region theory the importance of identifying and designing 'infrastructures of learning' that can support the development and maintenance of communities of practice. The facilities of engagement, imagination and alignment conceptualised by Wenger underpin the exercise of learning—engaging participants, enabling them to work towards possible futures or solutions, aligning activity and effort and supporting activity with practical tools and processes and documentation. Communities of practice are a way of conceptualising and analysing social learning processes and providing a model for groups to work together. They can support transformative learning and bring commitment beyond an individual or an organisation's aims, promoting understanding and empathy with other groups. By sharing responsibility and creating interdependence communities of practice support sustainability and, potentially mitigate some of the risk of parochial or elite groups owning the region's strategy. In a learning region communities of practice exist across a range of issues or projects supporting the development of new ideas and solutions, and a model of distributed leadership.

In the learning region the university is important. The university is situated uniquely to link education and training institutions and organisations in lifelong learning, to develop collaboration and partnership across organisations and sectors, to act as a knowledge centre and broker between local priorities and global concerns, providing a space where debate might flourish. It should also support innovation and knowledge transfer. The importance of research and deep understanding of issues needed to engage stakeholders in action also suggests a role for the university at this macro level in the analysis and development of policy and programs building from local experience. This thesis adds to the theory that the university is important in supporting the 'infrastructures of learning' and communities of practice. However, it also exposes a problem, that the university may not support the innovation system as assumed in research and knowledge transfer.

Further Research

Building on the work of the CRITICAL project, this thesis suggests that further examination of the ways in which a city strategy links to subregions would be helpful. This research could draw on the Learning Region Typology and Wenger's framework in new contexts to test their usefulness. Attention to scale of activity in sub-regions and the city region would provide

useful comparative material.

This study drew to completion as the IMHE study 'Supporting the Contribution of Higher Education Institutions to Regional Development' (2007) report was published. This presented a parallel and significant direction for examination of 'how universities might have a role joining up a wide range of national policies at the regional level (including) science and technology, industry, education and skills, health, culture and sport, environmental sustainability and social inclusion' (OECD 2007). Linked to further work with the Learning Region Typology this continues the development of the learning region concept and theory.

There is also an opportunity to focus on research in the areas of measures and impact. There is further opportunity at the local level to work with the NACC and NORTH Link/NIETL in the review of *Growing Melbourne's North*. This could consider new tools for capturing measures, such as the work on five capitals by Parkin (2005) or specific data types and multi-methods approach undertaken by Garlick et al (2005).

Also at the local level, there is a need for further work on the process of innovation in the industry network. Firstly, additional work would test if findings about innovation in these companies were consistent across a larger sample but also would develop understanding of the readiness of companies who have been down the path to innovation for more research and high technology support for innovation. This could continue the investigation into the role of universities and support the continued development of the industry network.

Postscript

The change in the federal government in November 2007 raised the hopes of network members in the light of sympathetic encouragement from local members of Federal Parliament garnered through the annual meetings initiated in the Wholesale Market project. As discussed in the epilogue to Chapter 6, the amalgamation of the north and west ACC was not viewed positively by the northern members and was clearly a diminution of capacity and service. With a new government at the very least the structure of two Boards and an executive committee drawn from both with executive officers remaining in their respective regions will be allowed and budget will remain stable. Hopefully, promises for changes in regional development policy will be realised and there will be improved opportunities for the regional economic development project.

Early promises from the new Government are hopeful. There has been a promise to focus on removal of state and federal tensions which could support the development of more regional

focused approaches. This view was encouraged by the establishment of a Department of Infrastructure, Transport, Regional Development and Local Government. In his first speech to Parliament (prior to this government) the Minister mentioned the needs of both rural and urban regions and said 'unique problems (of these regions) cannot be solved with the blunt instruments of macro-economic policy… Governments need responsive planning that meets with the individual needs of regions and communities' (Albanese 1996, p. 4). The Labor Strategy presented prior to the election at the Sustainable Economic Growth for Regional Australia (SEGRA) conference in 2007 promised a platform for regional development with four components:

1. A commitment to bring regional development into the mainstream
2. Recognition that a one size fits all approach will not work and a genuine commitment to localism to drive lasting solutions to end the blame game between various levels governments
3. Giving regions a greater say through the creation of a stronger and more participatory regional development network
4. National leadership on key infrastructure, including [a] commitment that all Australians, regardless of where they live, should have reasonable and affordable access to broadband services (Crean 2007).

In the first year in office a review of the ACC network is to be undertaken involving a consultative process. The signs have been positive with the establishment of the interim Board of Regional Development Australia and early comments from the Parliamentary Secretary which suggest a commitment to building the new Regional Development Australia Committees from the existing ACC network and a role for local government in the new arrangements.

Education is now located in the same Department as workplace relations under the Deputy Prime Minister but research has moved to the Department which includes industry. In her address to the research community at RMIT University the CEO of the Australian Research Council Professor Margaret Sheil commented on the move to the Department of Innovation, Industry, Science and Research by saying that in her first meeting with the Minister she was pleasantly surprised by the genuine interest expressed and the explanation for the relocation as a 'practical link between research and industry and the need for industry to learn more about how research works' (December 2007).

The new Government provides openings for policy and programs development. The Department of Infrastructure, Transport, Regional Development and Local Government could

develop better understanding and definitions for regions in Australia. Urban development could also be considered here and the role of local governments in urban strategy. In a Learning City Region approach there is rich material, expertise and international linkages to support the Australian metropolitan strategies which are in place yet floundering in implementation. There are potentially ways to develop a better understanding of how the city, the fringe and the rural areas connect as a particularly Australian regional development.

The 'wish list' that has developed from this study may be plausible in light of the directions of this new Government. Perhaps this optimism might be seen against the position reached at the end of Chapter 6 where the regional economic development project seemed at risk.

Conclusion

Robyn Archer, in her contribution to a discussion in the Melbourne Futures program, made two points drawn from her experience of being Director of the Melbourne Arts Festival. She suggested curiosity needs to be encouraged and developed in our society and when you do something 'big' that you match it with something 'small.' She described 'big' as a major act that 'costs the patrons a fortune and attracts the arts aficionados' and 'small' as putting something equal, including a smaller act by the same artist 'into the public realm where everyone has access and where curiosity is developed' (2007).

Her description of the funding, governance and sustainability issues in an arts festival alongside her passion for the arts and the public good did not seem far removed from the experience of the regional economic development project. In her terms in regional development it would be more appropriate to say 'big' and 'local'. In the world of the learning region there is a lesson from the arts festival. An engaged public needs to be curious about the people in their community, the place they live and their future and how it might be better. Energy needs to be spent here—we do not understand the possibilities of our cities and regions, we do not discuss how they might develop and we do not educate people to think about them. There are many opportunities to balance 'big and local' in policy and the learning region—the national and the local or the incentive program for business attraction and a program to mentor small business tied to place, an infrastructure discussion—an addition to public transport and the safety and amenity of the stops or the housing development and the local learning centre, and the possibilities are potentially far more creative.

There is no simple formula for the development of learning regions. However, it is possible to have characteristics of a learning region and there is hope for approaches which consider economic, social and cultural, and increasingly environmental concerns. There is also

evidence in this case study that people do want to make a difference and can work towards a better future and a better society. With curiosity, a more creative discussion and that match between the 'big' and the 'local', that inclusive, innovative and elusive plan for the learning region might be better articulated and understood, and then there is the possibility that it might be better acted upon.

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