

METROPOLITAN PLANNING AND NBN: A COMPARATIVE POLICY ANALYSIS, SYDNEY VS. BRISBANE

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ABSTRACT

The Australian government is currently constructing a National Broadband Network (NBN), which at an estimated cost of \$43 billion will be Australia's largest ever infrastructure project. The NBN, if its full benefits are to be realized, raises a number of important but to date largely unexplored questions for planning in Australia. This paper investigates the implications of the NBN for Australian metropolitan planning, and the extent and quality of current metropolitan planning in recognizing, planning for, and exploiting the NBN to improve urban outcomes in Australian cities. The paper focuses on the Sydney and Brisbane metropolitan areas, and analyzes the major strategic and policy documents shaping the future of these regions during the rollout and post construction periods of the NBN. Sydney's metropolitan strategic documents strongly assert its global position and seek a fair distribution of resources at the local scale. Brisbane, in contrast, is the heart of Australia's fastest growing region (South East Queensland) where metro-regional planning is assisting to facilitate and guide urban growth. A comparative analysis of the strategies and policies for Sydney and Brisbane reveals similarities in their weak stance towards the NBN and telecommunications generally. Some key findings include: a segregation of infrastructure planning and metropolitan planning; a lack of consistency between different policies within each metropolitan area; and policy gaps regarding the role of telecommunications at the metropolitan level. Considering the large size of the NBN investment, this paper is appropriately timed and addresses policy issues that will impact upon future metropolitan planning in Australia.

INTRODUCTION

The National Broadband Network (NBN) is the largest infrastructure investment in Australian history. However, the potential implications of this massive investment on the urban form and structure of cities have received little policy attention and have as yet not been explored by urban scholars. In this paper we pose a few preliminary questions that should be of interest to urban planners, managers and decision-makers. The first is the extent to which planning for new infrastructure, especially broadband technology is, or should be, incorporated into metropolitan strategic planning. This is particularly important given that historically, telecommunications infrastructure has rarely been considered by planners, in contrast to transport, water, waste-water or energy infrastructure. In many cities the relationship between infrastructure and planning has become a patchwork process, sometimes following the 'splintered' pattern described by Graham and Marvin (2001). Historically single institutional providers managed hydraulic and energy infrastructure, but this model has been replaced by a disparate array of fragmented infrastructure networks and institutions. The introduction of the NBN represents a move back to the single provider model and raises the question of whether metropolitan strategic planning can or should address such concerns. If broadband infrastructure is to be included in planning then the second question is as what scale – should it be at the federal, state/metropolitan, precinct, neighbourhood or property scale?

To address these questions, we present analysis and discussion in three sections. The first is a review of relevant literature, focusing on four key themes: economic competitiveness; infrastructure planning; urban structure and processes; and the NBN itself. The second section assesses how the NBN is treated by planners within the metropolitan plans of Sydney and Brisbane. And as the NBN is emerging during a period of increased Federal government interest in cities, we also assess the extent to which current Federal

government policies provide an urban response to the NBN. The final section of the paper provides the conclusions and implications of our findings for urban policy, metropolitan planning and planning scholarship.

BROADBAND INFRASTRUCTURE AND CITIES

Economic Competitiveness

There have traditionally been very close ties between economy and urban planning in which economic development has been introduced as the driving force behind many urban interventions. This close relationship means that shifts in economic discourses are often met by planning responses. Over the last few decades, under the economic globalization and the post-industrial 'new economy', the emphasis on economic development within cities has been transformed to an increasing focus on the economic competitiveness between cities. In this new economic discourse of 'urban entrepreneurialism' (Harvey, 1989) cities are described to be confronted with more and more new challenges and opportunities that could be tackled by global rather local forces (Rondinelli, et al., 1998). The new economy implies that as global network arises, only the cities that build sufficient infrastructure to connect to the network will thrive in the challenging competition (Blakely & Bradshaw, 2002; Herbers, 1990; Ross & Friedman, 1990).

By the turn of the 21st century, the significance of knowledge to the new economy is well established (Burton-Jones, 2001 ; David & Foray, 2002). However, it has been only recently that attempts have been made to identify the specific mechanism through which knowledge-based economy works. Among the number of mechanisms discussed in the literature, this paper is interested in the role defined for the new telecommunication infrastructure that facilitates both production and dissemination of information in the knowledge economy. In other words, economic competitiveness of cities and societies is to be assessed based on their provision of such infrastructure. Here telecommunication infrastructure is appreciated as a platform to move into the knowledge economy that provides support for future generations of applications and services underpinning all sectors of the new economy (Tucker, 2010).

Over the last decade, many national governments, including the UK (Galloway, 2007), Korea (Kelly, et al., 2003) and Spain (Gerrand, 2006) have been developing policy and implementing telecommunication infrastructure based on assumptions that the new technology-based infrastructure will return economic benefits (Willson, et al., 2009). A key driver of governments' plans to roll out the new large scale telecommunication infrastructure has been a belief that such investments will increase productivity and innovation, and guarantee their long term economic competitiveness. This belief is founded in part on the literature generated over the last 10 to 15 years, describing the potential economic and social benefits of such infrastructure for businesses and households (Galloway, 2007). Such reports have been produced in Australia too. For example, the Allen Consulting Group produced a report for Ericsson that predicted positive impacts for the metropolitan area of Brisbane as a result of 'a true broadband' deployment including increases in gross regional output, employment, and aggregate consumption (The Allan Consulting Group, 2003). However, there are very few empirical studies that analyse the impacts of telecommunication infrastructure post-implementation (Ford & Koutsky, 2005; Group., 2003; Lee, et al., 2005). In reality, it is extremely complex to establish beyond doubt that the infrastructure per se results in a change in an urban or regional economic indicator.

Infrastructure Planning

In addition to the dynamics of global economic changes, questions posed by infrastructure in cities have emerged at the fore of urban debates in recent years (Graham & Marvin, 2001; Swyngedouw, 1997). The surge of interest in infrastructure questions has involved a shift from conventional treatments organized around technical and engineering discussions to more recent approaches that emphasize the social character of infrastructure formations. Much of this new social interest in infrastructure stems from the recognition that many processes, structures and practices in modern life are intermediated through or more fundamentally made possible by infrastructure. Graham and Marvin (2001) charted multiple phases in the development of modern urban infrastructure from the initial ad-hoc emergence of new technical forms in

cities since the late-18th century. The process of industrialization of cities in the advanced economies of the 19th century was in part dependent on the introduction of new forms of infrastructure including railways and reticulated hydraulic systems. Suburbanization, as a spatial solution to the problems of intensive urban industrialization was dependent on infrastructure, initially the railway but from the late-1920s the freeway. Modern cities are now comprised through multiple and often inter-connected or overlapping networks of physical and digital infrastructure conveying not only people, water, wastes and energy, but also information (Graham & Marvin, 2001).

This development of cities as infrastructure complexes has also witnessed a shift from governance modes emphasizing vertical, often state-controlled, integration to one in which multiple public, private and quasi-private entities govern and manage urban infrastructure systems. Infrastructure has thus become implicated in processes of urban 'splintering' in which immanent social differences, principally organized around socio-economic cleavages have been recognized as important shapers of cities. Thus Graham and Marvin (2001), for example, argue that the increasingly private basis upon which infrastructure has come to be managed over the period since the 1970s has contributed to and in many cases exacerbated urban social divisions as profit, rather than notions of universal access, become the dominant driver of infrastructure provision.

For urban planners the resurgence of interest in infrastructure as a mediator of urban social relations, and accordingly as a shaper of cities, implies a need to more closely assess the links between infrastructure provision and other dimensions of planning. Perhaps the most prominent example of scholarship that seeks to apply an infrastructure perspective to urban planning has been Flyvbjerg's (2003) studies of megaprojects and risks. Flyvbjerg and his coauthors (Priemus, et al., 2008) have focused on infrastructure mega projects, typically of regional or national significance. A feature of their work has been the scale problems with megaprojects which make such schemes technical and financial management and governance extraordinarily complex. Flyvbjerg's work has tended though to give only modest emphasis to the land-use planning implications of megaprojects. Thus the integration of major infrastructure megaproject processes with conventional planning processes, such as land-use planning, has received much less attention in the infrastructure literature.

This problem afflicts urban planning scholarship more generally. Whereas planning modes, such as communicative planning, or strategic standpoints such as (European-style) spatial planning, have received considerable scholarly attention in recent decades, infrastructure has only recently begun to be addressed as a major land-use or spatial planning question (Dodson, 2009; Neuman, 2009; Steele & Gleeson, 2009). There is a particular gap in planning understanding of contemporary infrastructure in the links between technical systems, land-use activities and wider urban processes and formal planning activity. More recently, while social and economic geographers have paid close attention to the consequences of information technology for cities there has been less interest in the direct planning implications of this new infrastructure. This is despite a rather voluminous literature on the potential impact of information technology on urban processes (Castells, 1996, 1997, 1998; Mitchell, 1996, 1999, 2003). Thus some rather basic questions persist regarding this topic concerning such matters as the extent to which planners should address information technology when undertaking and implementing strategic plans. In the case of Australia's National Broadband Network however the introduction of a single integrated and universal information technology infrastructure network poses clear planning questions about the degree to which this network is presently, or should be, incorporated in metropolitan strategic plans, and in what ways. The NBN presents a fascinating case for investigating such questions for two reasons. First, it represents a major advance in the quality of information technology infrastructure in Australia, but also appears to contradict the 'splintering urbanism' hypothesis in offering a massive, ubiquitous, vertically and horizontally integrated and organized, national megaproject.

Urban Structure and Processes

Urban structure and processes have been investigated at the core of urban planning literature over the last few decades. Previous studies define urban structure as the spatial relationship between cities and their services and activities. Different patterns of urban structure have been identified and analyzed to understand the ways in which the structure may create problems for cities' development (Forster, 1995; Troy, 2004).

Here, a number of studies have followed a historic line to articulate how urban structure of different cities in different parts of the world were established and developed throughout their short or long histories. For example in the case of Australian cities, the colonial origin of establishing towns on green field sites – with no prior developed hinterland- is noted by different studies (Frost, 1991; Statham, 1991). Moreover, adoption of modern urban planning – early in the twentieth century – is realized as a factor that started the change in the urban structure of the major cities in Australia. This change process sped up shortly after the Second World War when metropolitan planning schemes were progressively adopted (Mullins, 1988).

Other studies investigating urban structure link their discussion to economic patterns (Alexander, 1980; Anas, et al., 1998; Burke, et al., 2010; Mees, 1995; O'Connor & Healy, 2002; Searle, 1998). Such studies concentrate on the location of employment and patterns of residential differentiation as the elements of urban structure that are highly related to the economic paradigm of cities (Forster, 2006; Rickwood & Glazebrook, 2009). In the case of Australian cities, previous studies have analyzed the latest strategic planning documents for the major metropolitan areas, and argue that they do not necessarily match with the actual nature of much economic activity and employment, and suggest an inflexible vision for the future that is at odds with the picture of increasing geographical and technological complexity in the twenty-first century (Forster, 2006; O'Connor & Healy, 2002) Pursuing the same line of linking urban structure and economy, there is a second group of studies that investigates spatial inequity in cities. This group contends that the spatial structure of cities is a major element in the transmission of social disadvantage. In the Australian planning context, this line of argument is mostly concerned with the extensive urban patterns, and is in line with the debates about “sprawl” vs. consolidation (Dodson, 2010; Mahe, 1994; Moriarty, 1998).

Notwithstanding the above, it is very important to understand that the advanced telecommunication infrastructure of the National Broadband Network has the potential to offer new employment opportunities within urban and regional Australia, and to change the function and the demand for and the nature of urban and rural services. In order to reach the full potential of such extensive urban infrastructure, NBN, it is needed to plan for the future of urban structure to work with the upcoming changes. To do so, such changes in technology, employment pattern and service distribution need to be assessed and acknowledged in the major urban policies guiding the future of metropolitan areas during watershed years of the NBN rollout and post-construction. This paper seeks to assess whether such acknowledgement exists at the strategic level for the Sydney and Brisbane metropolitan areas.

Developing the NBN

The shortcomings in Australia’s telecommunication infrastructure have been widely acknowledged in the literature over the last few years. It has been repeated so many times that Australia's broadband infrastructure is not as well developed as that in many other countries (Barr, 2008; Given, 2008; Middleton & Chang, 2008); average speeds are slow, prices are high, and download caps are restrictive (Middleton, 2009). Telecommunication infrastructure has been an issue of interest that has highly affected Australia’s political environment. After 11 years of Liberal National Coalition Federal Government, in November 2007 Australians voted for a new Labour Federal Government whose policy platform included planning for a National Broadband Network. In April 2009, the Labour Federal Government announced a National Broadband Network initiative (NBN) to connect all Australians to broadband, including superfast broadband for the vast majority. The NBN is expected to provide terrestrial fibre network coverage for 93% of Australian premises by the end of 2020, with the remaining 7% served by fixed wireless and satellite coverage (NBN Co. Ltd., 2010a). It represents the largest single infrastructure project undertaken in Australia, an investment up to \$43 billion over eight years (DBCDE, 2010b).

The next step in the development of the NBN was the establishment of the National Broadband Network Company (NBNCo) which was tasked with project development and rollout. The NBNCo has produced a raft of planning documents detailing the rollout strategy and its technical and contracting arrangements. These have largely focused on the project planning aspects of the NBN, such as the statutory land-use requirements applying to the local rollout of the fibre network and the management of environmental impacts arising from this work. In our investigation of the NBNCo material we have not found a substantive instance in which the wider urban land-use planning aspects of the NBN have been raised or addressed. For

example, an 'about the NBN' document identifies increased teleworking as an outcome that the NBN can facilitate but provides little information about how this might be encouraged beyond the simple infrastructure rollout (NBN Co. Ltd., 2010b). More substantive attention to urban development matters arrived in the form of the Department of Broadband, Communications and the Digital Economy policy on 'Fibre in New Developments' (DBCDE, 2010a) which recognized the importance of combining the rollout of the NBN with simultaneous new urban development to avoid retrofitting costs. This policy was however largely focused on clarifying responsibilities for sequencing of development with NBN rollout and gave NBNCos powers to install fibre in new development under given circumstances. The policy did not address wider urban development issues although the NBNCos factsheet explaining the policy noted that developments falling under the policy would be eligible to be marketed as 'NBN Fibre-Ready' estates' (NBN Co. Ltd., 2010b, p.1).

The significant expenditure of public funds involved with the NBN program has spurred a lively public debate about the project's merits, value and relevance (Tucker, 2010). Perhaps the high point of this public debate was when three independent MPs cited the NBN as one of the key reasons motivating their support for Labour over the Coalition following the hung parliament at the 2010 Federal election. Regardless of its political importance, the debates surrounding the NBN have generated a variety of arguments (Tucker, 2010) about the projects relevance and value. Thus NBN proponents anticipate radical changes and social and economic advances as direct results of the new infrastructure. Those opposed to the NBN, in contrast, question government's role in providing funding for large infrastructure projects, the cost involved, and the appropriateness of the technology adopted. With the issue highly politicised, there has been little space for evidence-base research. This paper does not offer a particular viewpoint on the merits or otherwise of the NBN and its technical foundations. Given the increasingly likely fact of the NBN we question to what extent recent and current metropolitan strategic plans for two of Australia's major urban areas – Sydney and Brisbane – respond to the urban possibilities of the NBN, whether economic, social or otherwise.

STUDY AND METHODS

We acknowledge that adequate and supportive urban strategies and policies are required to ensure that the upcoming major investment in the NBN reaches its potential. In order to contribute to the provision of a NBN-aware urban framework, this paper focuses on Sydney, as Australia's largest metropolitan city, and Brisbane (and partly South East Queensland), as Australia's fastest growing metropolitan city. A number of major documents shaping the future of each metropolitan area will be analyzed. We assess the role of telecommunication infrastructure and services including the NBN within Sydney and Brisbane's metropolitan plans according to the three key themes identified in the literature - economic competitiveness, infrastructure planning, and urban structure and processes.

FEDERAL URBAN POLICY

After some decades of relative neglect of urban policy the past several years have witnessed an increasing Australian Federal Government interest in urban challenges and problems with infrastructure a particular area of policy concern. Given the focus of this paper and the scale of the NBN as a national infrastructure project, it is worth asking what connection the Australian government sees between the NBN, urban policy and urban development outcomes. The following section assesses the content of current urban policy relative to the NBN.

Economic Competitiveness

In 2008 the Council of Australian Governments (COAG) was initiated as a forum comprised of the national and state governments to address policy coordination and development issues. As part of its policy on cities, COAG recognized the need to provide for nationally-significant economic infrastructure (both new and upgrade of existing) and included communications among the list of five infrastructure types, along with transport corridors and international gateways. The first Infrastructure Australia (IA) document prepared for COAG also included 'a national broadband network' as one of seven themes that would meet gaps, and deficiencies in national infrastructure. Most of the discussion around broadband related to procurement and governance issues and the importance of broadband technology to economic competitiveness at the global and regional stage. The main planning matters seen as relevant to the mooted NBN were spatial equity in

access to advanced services for those living in Australia's regional and remote settlements (Infrastructure Australia, 2008b). This view continued a line of thinking that had emerged in Australian government policy documents relating to ICT in the mid-2000s which had affirmed the community and social-capital impacts of broadband systems within the context of a highly uneven continental settlement pattern (DCITA, 2005a, 2005b, 2006). The subsequent IA infrastructure priorities report reinforced the national significance of broadband and tied this explicitly to urban and regional planning considerations, arguing that "communications needs to be more actively incorporated into urban, economic, and regional planning from now on" (Infrastructure Australia, 2009, p.13).

Infrastructure Planning

Infrastructure Australia (IA) was also tasked with identifying infrastructure priorities for Australia, which resulted in a number of reports on infrastructure and cities. Infrastructure Australia's program gave particular emphasis to the establishment of a defensible methodology for identifying the key infrastructure priorities based on criteria such as economic efficiency and environmental performance (Infrastructure Australia, 2008a). The focus on assessment methodology was aimed at avoiding the tendency of Australian Federal policy-making towards ad-hoc decisions in the selection of infrastructure. This methodology was then used to select meritorious projects from those submitted by state governments. Projects supported through this program included a majority weighting towards public transport infrastructure, including metropolitan heavy and light rail links and bus ways, but with a nonetheless substantial road content. A national broadband network was however included in this meritorious assessment. Although it was a stand-alone part of the current government's 2007 policy platform the NBN was largely developed outside of the Infrastructure Australia framework and is projected to cost more than double Infrastructure Australia's initial funding program for all other federally funded infrastructure combined.

Urban Structure and Processes

When it comes to policies concerning urban structure, the level of Federal Government involvement is mostly indirect. Infrastructure Australia was asked to establish new urban policy capacity in the form of the Major Cities Unit (MCU) which was given the role of doing background and consultation work towards the development of a national urban policy. The Major Cities Unit's work program was not limited to urban structure and processes. It was concerned with wider issues facing the current state of Australian cities and their problems by synthesizing a raft of state, federal and scholarly research and evidence. This was then translated into three key reports that fed into a program of consultation on the development of a National Urban Policy. In parallel to this national urban policy activity, in response to updated national population that saw Australia's population projected to reach 50 million by 2050, the Australian government began preparing a Sustainable Population Policy. The 2011 Federal Budget saw a joint release of a National Urban Policy (DIT, 2011) and a Sustainable Population Policy (DSEWPC, 2011). The substantive content of the sustainable population policy focused on encouraging employment suburbanization, road pricing and population dispersal to regional cities. The NBN was noted as a key tool in managing population distribution by reducing spatial frictions thus enabling greater dispersion such that "the Government's \$35.9 billion investment in the National Broadband Network will help connect regional families, communities and businesses – reducing the tyranny of distance, changing the way we live and work" (DSEWPC, 2011, p.79). The discussion provided no insight however into the local or metropolitan land-use implications of the NBN.

URBAN POLICY AND METROPOLITAN PLANNING: SYDNEY

Over the last few years the New South Wales (NSW) government released a number of policy documents to guide the future of the Sydney metropolitan area. In December 2005, Metropolitan Strategy for Sydney 2031 – City of Cities: A Plan for Sydney's Future (Department of Planning, 2005) - was released. This was shortly followed by the State Infrastructure Strategy: New South Wales 2006–07 to 2015–16 (NSW Government, 2006) in June 2006. Both documents attracted a wide range of reactions from planning academia, the profession and the public, and were subsequently amended and updated. In June 2008, the new State Infrastructure Strategy for 2008–09 to 2018–19 (NSW Government, 2008), and in December 2010 Metropolitan Strategy Review: Sydney towards 2036 (Department of Planning, 2010) were released to

supersede the initial documents. Particularly, the Metropolitan Strategy Review was set to incorporate the principles of the Metropolitan Transport Plan 2010: Connecting the City of Cities (NSW Government, 2010) and to integrate transport and land-use. The following section assesses these documents in an effort to understand their stance towards and treatment of telecommunications planning issues, in particular the NBN, considering that they are to guide Sydney during the timeframe that NBN will be rolled out.

Economic Competitiveness

Both the 2005 and 2010 Metropolitan Strategies emphasize that in order to secure Sydney's global position, it is important to enhance its economic competitiveness at the global stage. In fact, this notion has found its way into the vision of the plans, and their main aims and strategies. Both documents are also very protective of Sydney's high proportion of employment in financial services at national level, and its major role in the Asia-Pacific, as the home to 60 percent of headquarters established by multinational companies. Yet, both documents fail to clarify Sydney's position in the knowledge economy, and this is where their underestimation of telecommunication's role in the new economy appears. Failing to acknowledge the shift in the economy at the global stage, leads to their second failure of not defining the significant role of telecommunication technologies as a new infrastructure in the arising knowledge economy. In other words, metropolitan planning for Sydney falls short to acknowledge the potential economic and social impact of telecommunication, and does not offer any intent or strategy to work with the NBN during its rollout and post-construction phases.

Infrastructure Planning

Both the 2006 and 2008 State Infrastructure Strategies place infrastructure into one of five categories: human services; electricity; water; transport; and justice. They do, however, acknowledge that future technological advances have implications for telecommunication infrastructure and the way services are delivered by government. Considering that the discussions over NBN only began in 2007 and no real action was taken before 2009, it is quite understandable why these documents did not pay much attention to telecommunication infrastructure and more specifically the NBN. Yet, the non-recognition of the impact of telecommunication seems to continue in more recent policy documents as well. The Metropolitan Strategy Review (2010) was produced after three years in which the NBN was a prominent feature of federal policy development and was one of the few policy foci of the August 2010 Federal Election. The review document is also to guide Sydney during the rollout and post-construction periods of the NBN. Yet, none of these encouraged the very major document to break its silence on the upcoming telecommunication infrastructure. Looking at both 2005 and 2010 Metropolitan Strategies shows that they mostly define infrastructure as 'transport and others', and recognize very little integration between metropolitan planning and infrastructure planning. As a result of this gap, the possibilities that the NBN may have implications for land-use planning were completely ignored.

Urban Structure and Processes

The Metropolitan Strategy 2031 presented a vision for the metropolitan area to work as a city of cities, and supported a metropolis made up of five key cities and 22 strategic centers. The stated goal was to strengthen all five key metropolitan centers - not just the two harbor cities of the CBD and North Sydney, but also the western Sydney centers of the Parramatta Liverpool and Penrith. The intended polycentric structure of Sydney was planned to work by connecting key centers via major transport corridors. However, the ambition of equally distributed growth for all five key centers diminished in the Metropolitan Strategy Review (2010). In the new strategy, the key cities are divided into two very different categories. While the CBD and North Sydney are addressed as Global Sydney; the other three are labeled as Regional Cities, and obviously do not get the same level of attention. This paper argues this shift could be moderated if telecommunication-based possibilities to offer better opportunities for outer centers (especially Parramatta) had been addressed. Metropolitan planning in Sydney needs to seek explicit priorities for all key centers and corridors to have access to the telecommunication infrastructure to pursue the notion of fairness in its future growth.

URBAN POLICY AND METROPOLITAN PLANNING: BRISBANE

Over the past decade there have been a host of strategies, visions and plans produced for Brisbane and its metropolitan region. Those produced explicitly for Brisbane City Council include: City Plan (2000); the Brisbane Economic Development Plan (2005); Brisbane City Shape 2026 (Brisbane City Council, 2006a); Living in Brisbane 2026 (Brisbane City Council, 2006b); and the Brisbane Long Term Infrastructure Plan (2007). Plans produced by the Queensland Government for the South East Queensland region or for the state as a whole include: the Smart State Strategy (2008); the South East Queensland Regional Plan (2009); and the South East Queensland Regional Infrastructure Plan (2010). Finally the River City Blueprint (2010) focused on inner Brisbane (a 5km radius from the GPO) and was a joint effort of Brisbane City Council and the Queensland Government. What follows is a brief analysis of what these plans, visions and strategies say about telecommunication infrastructure and its role in the future development of Brisbane.

Economic Competitiveness

Several of the documents, particularly the Living in Brisbane 2026 vision, suggest that Brisbane will be a “regional and global” city. However discussions of the type contained in Sydney’s plans and strategies are largely absent in Brisbane and South East Queensland. The one plan that speaks directly to the question of economic competitiveness is the Brisbane Economic Development Plan (Brisbane City Council, 2005) that provides a framework for action over the 2002-2005 period. The plan notes that Brisbane has an unfavourable “cost-to-performance ratio” for high-speed broadband compared to other global cities. The plan advocates for a partnership between Brisbane City Council and the Queensland Government to provide fibre optic broadband to all homes and businesses in the city funded through a public-private partnership. Brisbane City Shape 2026 provides a future vision for the city and notes the need for additional economic development, but the discussion is limited to creative industries, the city centre, the Trade Coast and new industrial estates. There is no mention of the internet, broadband or telecommunication.

Infrastructure Planning

There are two key documents that deal with infrastructure planning: the Brisbane Long Term Infrastructure Plan (Brisbane City Council, 2007); and the South East Queensland Regional Infrastructure Plan (Queensland Government, 2010). The Brisbane Plan, although produced in 2007, acknowledges the role of high-speed broadband. First it advocates giving priority to projects that bolster economic development like “broadbanding”. Second, it notes that without significant stimulation, commercial providers will not make the long-term investments needed for high-speed broadband. Third, it recommends that the Queensland Development Code be amended to mandate capacity for broadband infrastructure in new multi-tenanted buildings. Finally is the first mention of Project Vista, a Queensland Government initiative (delivered in partnership with Brisbane City Council, Energex, Queensland Rail and the private sector) to provide high-speed broadband (in excess of 100Mbps) to Brisbane City.

While Project Vista was not realized in part due to the discussions at the national level about an NBN, another plan was announced in 2010 – this time mooted by Brisbane City Council, to provide Brisbane with high-speed broadband by running internet cables in the city’s sewer lines. This plan would have cost \$600 million to provide 100Mbps services to the city. However, like Project Vista, this project never came to fruition due to the focus on flood recovery by Brisbane City Council and financial problems on the part of the company that was to provide the service.

The South East Queensland Regional Infrastructure Plan, although prepared in 2010 makes no mention of telecommunications generally or high-speed broadband specifically. This is an unexpected omission given that the South East Queensland Regional Plan (Queensland Government, 2009) has an entire section (10.6) devoted to “Information and Communication”. One of its guiding principles is to provide affordable access to high-speed broadband telecommunications by expediting the deployment of high-speed broadband in South East Queensland. While noting that state and local governments are constrained in their ability to encourage investment in broadband, it nonetheless acknowledges that “broadband services are an indispensable component of business growth and efficiency in a modern economy”.

Urban Structure and Processes

The most current and potentially relevant plan related to urban structure is the River City Blueprint (Brisbane City Council, 2010). It focuses on the inner Brisbane area and establishes a number of key sub-centres within 5km of the CBD. It notes that "broadband internet access is an essential requirement to participate in the so called 'new economy'", however the main focus appears to be on what type of service (dial-up or broadband) is available to households. Unfortunately the discussion goes no further, with no acknowledgement of the NBN or what impact it might have on the Blueprint. The other key document related to urban structure is the South East Queensland Regional Plan, however while noting the importance of high-speed broadband access, it does not speak to how such service might affect designated regional and sub-regional centres.

CONCLUSION

This analysis has helped to provide answers to the two questions posed in the introduction. On the question of whether the NBN should be incorporated into metropolitan planning strategies, the answer is a resounding yes. The NBN has the potential to have a major impact on the productivity and structure of our cities. As for the second question of the scale, we believe there is a need to incorporate the NBN at all levels, but most importantly at the national and state/metropolitan levels. Our investigation of major policy documents prepared for Sydney and Brisbane metropolitan areas revealed that currently infrastructure planning and metropolitan planning in both regions are highly segregated. There might have been some attempts to connect transport planning and land-use planning. Yet, the linkage has not reached other areas of infrastructure, including but not limited to telecommunication (NBN).

There is also a lack of consistency between different policy documents defining telecommunication's role affecting each metropolitan area. From the Federal government perspective, current urban policy directions reveal that high-speed broadband is viewed as an important component of a national infrastructure suite. The NBN is now a focal feature of the Australian government's policy platform and is accompanied by high expectations about its ability to resolve multiple policy challenges relating to economic productivity and social connectedness. The nation's major cities are now recognized in national policy as key features of the Australian economic and social landscape with policy attention directed to resolving some of their problems, especially regarding infrastructure. The NBN is implicated in these discussions but so far there have been few, if any, connections made between the digital infrastructure and urban structure and productivity. This has two effects. First there is little thinking about the links between the NBN rollout and urban development possibilities. Thus potential new directions for land-use development are going unheeded. Second, there is little direction to the State governments that the NBN should be incorporated into metropolitan strategic planning. The failures to address digital infrastructure in recent metropolitan plans as demonstrated in the case studies of Sydney and Brisbane provided in this paper poses the risk that subsequent rounds of new metropolitan plans and strategies prepared under the new COAG planning principles could ignore NBN opportunities. This could potentially set back Australia's metropolitan adjustment and adoption of digitally-oriented-development for a further half-decade, given the timing that is typical of metropolitan strategies.

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