

# **Green Star Communities Information Papers**

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## **Green Star Communities Information Papers**

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## **Preface**

In June 2010 the Green Building Council of Australia (GBCA) commissioned from the Urban Research Program (URP) at Griffith University a set of information papers as a contribution to its process of developing a tool for rating the sustainability of communities across Australia. Building on its extensive experience in the development and application of rating tools for various types of building, the GBCA is in the process of extending the scope for this latest tool to include developments at the precinct or neighbourhood scale.

Initial discussions with key stakeholders identified five key principles that are believed to apply to the development of sustainable communities:

- Liveability
- Economic prosperity
- Environmental quality
- Place making
- Urban governance

This set of Information Papers addresses each of these principles. Each paper provides a concise summary of the most significant recent academic and policy literature as it relates to each principle. The literature is limited to that published in English, mainly during the last two decades.

The material in each paper is organised under the broad headings of current policy context, current academic and policy research, and any reviews of existing tools or measures in use. Each includes a more extensive bibliography of material not summarised in the review.

Each paper has been revised in the light of helpful and critical comments from the GBCA and its sponsors.

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## Introduction

While these papers deal separately with the important issues of liveability, economic prosperity, environmental quality and place making and governance, perhaps the most important lesson from the literature is that for places to work well all of these elements must be harnessed effectively into a coherent local strategy. A growing body of work highlights the value of local development strategies that link economic and social aspects of development; that bring together professional planners, policy makers and service deliverers with local residents; and that focus on building local resilience or the ability to grow and to withstand external shocks to the local system.

However, valuable lessons from policy development in the UK and Europe (CLES, 2009) demonstrate that the production of strategies and the creation of new local institutions are necessary but insufficient steps in the creation of sustainable local communities. Policy analysts have long pointed to the importance of developing effective implementation frameworks that identify the resources necessary to put strategies into effect and to allow new institutions the time to make a difference. While Australia may learn from these experiences, the even shorter electoral cycle does not typically encourage policy stability and the opportunity to make a lasting and positive difference to places and communities.

Measuring the impacts of changes to places, be they at the metropolitan and city scale or at the local or neighbourhood level, is important if we know if our plans and strategies for improvement have worked. Urban or neighbourhood change measures are also important in calibrating the pace and scale of external shocks that harm neighbourhoods. While measures and their associated ranking systems are attractive to those with ambitions to be better than other places, they are not without their flaws. Bell and Jayne's (2006) study of 'small cities' considers some of the methodological problems associated with the construction of urban hierarchies and warns of the dangers faced by smaller cities in trying to compete with larger cities for people, capital, cultural services and sporting events. These dangers also exist at the neighbourhood scale, not least in the tendency to treat them as socially and culturally homogeneous and hence to generalise inappropriately about a whole place (Melbourne is cool, Sydney is arrogant, Brisbane is laid back). In building from the ground up the approach of the GBCA to constructing a framework for identifying and measuring local sustainability has the potential to sidestep these methodological problems and practical misuses. Recently published work by the Australian Conservation Foundation in ranking the sustainability of Australia's 20 largest cities highlights these methodological problems of comparison in saying, 'direct comparison between cities in the different national indices is not intended or meaningful' (ACF, 2010: 4).

The Institute for Sustainable Futures at the University of Technology, Sydney recently completed a scoping study to examine the need for a national sustainability methodology for neighbourhood scale urban development (Fyfe et al, 2008). This reviewed 16 sustainability assessment methodologies from Australia and beyond and presented them to workshops of key stakeholders and industry experts. They concluded that a national framework would be useful and called on the Commonwealth government to support its development. It is not yet fully apparent how the recent change of government may have affected the response to this call.

# Information Paper 1: Liveability

## 1. Current policy context and policy measures

In recent years, a number of liveability indices and studies have been published to assess the relative position of various 'global cities' against each other in various categories. These liveability measures are typically used as a tool to make comparisons between cities with various outcome 'scores' receiving widespread media attention. Results are increasingly publicised by cities that score highly, particularly to secure business and human capital, and by companies to determine remuneration and conditions for expatriates. In Australia, there has been considerable attention devoted to focusing more on the general quality-of-life of a city from the perspective of existing citizens under the guise of 'liveability'. There is growing evidence that such measures are being taken up increasingly by larger urban local governments to track progress in improving elements of liveability in the community. However, to date, there is no established theoretical framework or uniform definition of liveability. This information paper unpacks both the liveability literature as it applies to Australia's cities and the range of measurement and indicator frameworks that currently purport to assess urban liveability. In doing so, the paper will draw attention to the significant gaps that exist in both these literatures, particularly with respect to comprehensively understanding urban quality of life.

## 2. Current academic and policy research

### 2.1 Defining Liveability

There is no established theoretical framework or uniform definition of liveability, and the liveability literature consists mainly of empirical studies, which generally involve a direct comparison of a composite measure over different geographic areas. There are numerous studies which rank the liveability of cities or countries. Some are created to assess the 'hardship' of particular destinations, while others focus more on the general quality-of-life of a country or city from the perspective of existing citizens.

Although livability cannot be defined uncontroversially or measured precisely, it is recognized as a very important concept and consideration in the societies of developed countries. Vuchic (1999: 7) is commonly cited for his view of urban liveability as "generally understood to encompass those elements of home, neighborhood, and metropolitan area that contribute to safety, economic opportunities and welfare, health, convenience, mobility, and recreation". A livable city is difficult to define precisely, but one can recognize elements that contribute to making an urbanized area livable. By the same token, one can quickly recognize the city that is nonfunctional, that is riddled with problems, that has no social life and few cultural functions (*ibid.*: 233). The concept of *livability* is thus a qualitative one; it represents the characteristic that "depends on the attractiveness of an area as a place in which to live, work, invest, and do business." (*ibid.*: xix)

At the international level, liveability has tended to be treated in a very broad sense, and with only limited distinction between it and sustainable development. In the United States, for example, 'liveability' encompasses a wide array of issues relating to overall 'quality of life' and 'well being'. In the United Kingdom, liveability instead has been adopted in a much narrower and more operational sense; the "cleaner, safer, greener" agenda. Although it is still considered an 'umbrella' term that refers to a number of interrelated concerns, its focus is strictly upon the local environment.

The link between liveability and sustainable development is not altogether clear. In some cases the two terms are used interchangeably, in other contexts liveability is regarded as being a subset of a sustainable region or city. The consultancy group Brook Lyndhurst (2004: 6) referring to the United Kingdom concludes that:

*Our research suggests there is a general lack of discussion in the recent research and policy literature about the possible interplay between liveability and sustainable development. While each agenda is increasingly discussed in its own right, little attention is paid to whether they are mutually reinforcing or whether they potentially conflict. Indeed, in many instances we note that they are taken to be synonymous and interchangeable terms.*

In Australia, Melbourne has clearly been the city that has embraced the liveability terminology. Indeed, it became so enamoured with the notion that it established a full state inquiry on behalf of the Victorian Competition and Efficiency Commission (2008). Through the large number of submissions to the inquiry, the Commission (2008: 10), in examining definitions of liveability, identified a number of common elements and developed a working definition of liveability that it considers encapsulates in broad terms the key issues identified by its consultation:

*Liveability reflects the wellbeing of a community and comprises the many characteristics that make a location a place where people want to live now and in the future.*

The Commission further highlighted the main drivers of liveability:

- economic strength and markets
- governments and decision making
- communities and human rights.

The Commission suggested that the effective interaction of economic strength and markets, governments, equity and human rights, with high standards of liveability is dependent on:

- improved information provision, to allow more informed (and more efficient) decision making to occur
- best practice regulation, to ensure only appropriate and necessary government intervention in community and business activities

- governance architecture that ensures the development and implementation of planning and other policies are as well integrated as possible, including:
  - the principle of subsidiarity, whereby decisions are taken as close as practicable to those affected, which can facilitate consideration by markets and governments of the views of their customers and communities, and can promote engagement, a key component of liveability.

These three themes recur throughout the report and underpin many of the Commission's findings and recommendations.

The City of Melbourne (2007) also published a research paper on city benchmarking and liveability that guided some of VCEC's early inquiry discussions. The Inquiry produced a discussion paper, concluding (p.16) that

*“.. many liveability measures and rankings are used for direct comparison of international and domestic cities and regions. The subjective nature of the inclusion of factors relating to liveability, the weighting of these factors, and the vastly different indicators being included, results in different measures providing different rankings of the liveability of cities. There is a lack of theoretical underpinning for these measures, particularly for composite measures. It is questionable whether any of the above composite measures would be directly relevant for informing public policy. A mix of locally relevant factors could, however, be selected and used for the purposes of public policy analysis”.*

More applied notions of liveability are evident in some planning systems, notably in WA where Liveable Neighbourhoods (State of WA, 2007) is an operational policy for the design and assessment of structure plans (regional, district and local) and subdivision for new urban areas (predominately residential) with the following aims:

1. To provide for an urban structure of walkable neighbourhoods clustering to and from towns of compatible mixed uses in order to reduce car dependence for access to employment, retail and community facilities.
2. To ensure that walkable neighbourhoods and access to services and facilities are designed for all users, including those with disabilities.
3. To foster a sense of community and strong local identity and sense of place in neighbourhoods and towns.
4. To provide for access generally by way of an interconnected network of streets that facilitate safe, efficient and pleasant walking, cycling and driving.
5. To ensure active street land-use interfaces, with building frontages to streets to improve personal safety through increased surveillance and activity.
6. To facilitate new development which supports the efficiency of public transport systems where available, and provides safe, direct access to the system for residents.

7. To facilitate mixed-use urban development which provides for a wide range of living, employment and leisure opportunities, capable of adapting over time as the community changes and which reflects appropriate community standards of health, safety and amenity.
8. To provide a variety of lot sizes and housing types to cater for the diverse housing needs of the community at a density that can ultimately support the provision of local services.
9. To ensure the avoidance of key environmental areas and the incorporation of significant cultural and environmental features of a site into the design of an area.
10. To provide for a more integrated approach to the design of open space and urban water management.
11. To ensure cost-effective and resource efficient development to promote affordable housing.
12. To maximise land efficiency wherever possible.

### **3. Measures and tools**

#### **3.1 Current Liveability / Quality of Life City Indices**

To date, a number of major international studies have been conducted that focus to varying degrees on liveability. These include:

- Mercer Quality of Living Survey
- Economist Intelligence Unit (EIU) Quality of Life Index
- Demographia International Housing Affordability Survey
- Jones Lang LaSalle City Governance Index
- Anholt City Brands Index
- GaWC World Cities Index
- Monocle Global Quality of Life Survey

Broadly, these benchmarking studies can be categorised as ‘quality of life surveys’, ‘cost of living surveys’, and ‘other specific surveys’. Each of these studies varies in their scope, methodology and comprehensiveness. Focusing on those (Mercer and EIU) that purport to measure quality of life in major cities and are the most commonly cited in Australia, the following summarises their main characteristics.

The EIU ranks cities on their liveability as part of the Worldwide Cost of Living Survey. Living conditions are assessed using around 40 indicators, with each city being given a value between one and five for each indicator. These scores are then grouped into five weighted categories to allow a rating of between 0 per cent and 100 per cent to be

determined for each city — the lower the score the more ‘liveable’ the city. The five weighted categories of the EIU Quality of Life rating are:

- Stability (25 per cent) — prevalence of petty crime, prevalence of violent crime, threat of military conflict, threat of civil unrest/conflict, threat of terrorism
- Healthcare (20 per cent) — availability of public and private healthcare, quality of public and private healthcare provision, availability of over-the-counter drugs, general healthcare indicators
- Culture and Environment (25 per cent) — climate (humidity/temperature rating, discomfort to travellers, cultural hardship), corruption, social/religious restrictions, level of censorship, recreation (sports, culture, food and drink), availability of consumer goods and services
- Education (10 per cent) — availability of private education, quality of private education provision, general public education indicators
- Infrastructure (20 per cent) — transport (quality of road network, quality of public transport, quality of regional or international links), housing (availability of good quality housing), utilities (quality of energy provision, quality of water provision, quality of telecommunications infrastructure).

In recent years, Melbourne has ranked highly in the EIU’s liveability surveys and as the world’s most liveable city in 2003 and 2004, helped by favourable scores with regard to violent crime and climatic conditions. In 2005, Melbourne slipped in its international rankings to second behind Vancouver, a result largely due to Melbourne being judged to have less recreation activities relative to Vancouver (City of Melbourne 2007). In 2009, Melbourne was ranked third (97.5%) behind Vancouver (98.0%) and Vienna (97.9%), with Perth (96.6%) third and Sydney (96.1%) equal ninth<sup>1</sup>.

Mercer Human Resource Consulting’s annual worldwide quality of living survey is designed to assist people moving internationally and companies who relocate employees to decide on appropriate remuneration. It is a measurement based on 39 factors that are grouped into 10 key categories. These are:

- political and social environment - eg, political stability, crime and law
- enforcement
- economic environment - eg, banking services
- socio-cultural environment - eg, civil liberties
- health and sanitation
- schools and education
- public services and transportation

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<sup>1</sup> [http://www.economist.com/markets/rankings/displaystory.cfm?story\\_id=13809770](http://www.economist.com/markets/rankings/displaystory.cfm?story_id=13809770)

- recreation
- consumer goods
- housing
- natural environment - eg climate.

Cities are then weighted and ranked against the base city, New York, which has a score of 100. In 2008, Zurich was ranked the world's top city with a score of 108.1. Sydney was ranked tenth behind other Asia-Pacific cities such as Vancouver (fourth) and Auckland (fifth), Other Australian cities –were ranked: Melbourne 17, Perth 21, Adelaide 29, and Brisbane 34 (Mercer 2008).

The other commonly cited global cities liveability study is the London-based global affairs magazine *Monocle's* Quality of Life Survey which uses a combination of both objective data and subjective opinion to come up with a list of the top 25 most liveable cities in the world. Melbourne was ranked the highest of Australian cities at ninth (Zurich first) and Sydney thirteenth.

### **3.2 Methodological Limitations**

While each of these annual surveys generates substantial media attention, particularly in Sydney and Melbourne, there are more fundamental limitations of these studies that must be emphasized. Using indicators to benchmark cities according to its liveability is a useful tool for both communicating how well a city is performing against its competitors and for helping to establish targeted policy directions. However, as Holloway & Wajzer (2008) note, “city benchmarking also has a number of limitations that undermine their validity for measuring and monitoring performance and for informing urban policy”. These limitations include the integrity and compatibility of data among cities, the overstatement of the cause and effect relationship between indicators and city outcomes, and the subjectivity of the analysis and conclusions (Stokic 1999).

#### *Data integrity and compatibility*

All city liveability indicator exercises are limited by the availability and comparability of data. From the outset, these issues limit the scope, depth and diversity of what can be measured, in turn limiting the extent to which indicators can be used to compare and monitor city performance. It remains far too tempting to select indicators based on availability of data, as opposed to selecting data that would provide meaningful and relevant information. Key problems include data gaps across indicators and comparator cities, the reliability and regularity of published and unpublished data sets, and the methodological differences in data collection, classification, and reporting specific to national contexts.

Another issue with data compatibility is large variance in geographic size of each city with administrative boundaries for which data is collected varying significantly, and in turn, impacting on the data results. While some indicators attempt to manage this by reporting per capita or per area, these techniques have their own limitations.

### *Indicators*

Holloway & Wajzer (2008) remind us that “indicators only provide a proxy for performance and are not a perfect or total measure of performance”. Therefore, the relationship between liveability indicators and overall city performance is not straightforward, and no direct cause and effect relationship can be attributed. Many city benchmarking exercises often overstate the relationship between indicators and city performance, and data alone will not provide an adequate assessment of the performance of a city (Stokie 1999). Benchmarking studies often use too many indicators and complex scoring and ranking systems that hide findings within the complexity. In particular, indicators of averages (such as ‘per capita’ indices) tend to omit the range and distribution of data. Averages do not adequately capture ‘highs’ and ‘lows’ of performance in cities and indicators therefore risk inappropriately ‘hiding’ spatial variation in performance across a city. They can also hide variations within categories experienced by particular socio-economic groups or sectors. Similarly, the use of composite indicators is problematic. Composite indicators result from aggregating a range of indicators representing complex and multi-faceted issues (first applying various weights to the components to reflect their perceived relative importance) to develop a single indicator. A single composite indicator permits comparisons to occur over time and between the entities being examined. The Mercer Quality of Living Survey and the EIU Liveability Rankings are composite indicators, both of which were developed to assist businesses to determine remuneration levels for expatriate staff. The validity and relevance of composite indicators in informing policy debate and assisting in policy development is generally limited as their component measures have lost their separate meaning through aggregation, with the nature of the components and their respective weightings in aggregation being the result of subjective decisions. Composite indicators say very little about how ‘liveable’ a city is for all who live and work there as the composition of the indicators reflects the preferences of a specific audience.

This problem is also evident in league tables. League tables can fail to take into account deviation from the mean over time. For example a city’s position in a league table may fall and thus interpreted as a decline in performance. However, over time, all cities may have improved across all indicators. This would mean that whilst a city has “fallen down” the list of cities, its performance may actually be improving over time. League tables are also problematic in that they do not reward well-rounded performance. Good scores across all indicators and dimensions may not be reflected as highly as a city that has performed exceptionally in some indicators or dimensions and poorly in others. This issue is exacerbated when indicators or dimensions are weighted using different rationales and criteria.

Incorporating social and cultural measures has traditionally proved to be the most challenging dimension in assessing liveability, due to the more subjective and less tangible aspects of these indicators. Holloway & Wajzer (2008) again note that benchmarking exercises are “understandably attracted” to the more objective quantifiable indicators in the social and cultural realms to equate with similarly well-founded basic economic and environmental indicators.

### *Subjectivity*

A notable feature of virtually all of the prominent city liveability studies is that they take very little to no account of the perceptions of day-to-day residents about city life, a critical methodological weakness given these perceptions are critical in assessing any city's performance. Analysis of benchmarking results must also consider that cities are heterogeneous entities (Luque-Martinez and Munoz-Leiva, 2005). Cities have specific cultural, social, economic, geographical and political contexts that influence the performance of a city. Different cities may also be at different stages in their urban development cycle (Stokic 1999). These are not often considered in the interpretation of results, with too much weight given to the relationship between performance and indicators. Finally, many of the existing benchmarking studies are not specifically designed for public policy.

These prominent liveability studies should not overshadow important scholarship with regard to urban liveability indicators occurring in Australia. It is acknowledged that several prominent indicators of disadvantage studies have been particularly influential in Australian urban areas, particularly those of Baum (2008), Saunders et.al. (2008), Vinson (2007) and Cummins et.al. (2007) with his especially influential *Wellbeing Index* developed by the Australian Centre on Quality of Life at Deakin University.

Commensurate intent lay behind the Leventhal et al (2009) Common Cause Report into Sydney's Key Social Issues drawing on a range of data from sources such as the ABS, government and academic reports, to assess social exclusion and disadvantage across various areas within Greater Sydney. In a similar vein, the MacroMelbourne Initiative led by the Melbourne Community Foundation in partnership with a range of organisations including Deakin University and the Victorian Council of Social Services has also produced a study (Hancock & Horrocks 2006) on disadvantage across Melbourne. The report identified the significant challenges facing Melbourne ensuring that plans to limit urban growth do not unfairly impact on the most socially excluded groups. Another study using existing ABS data, the BankWest Quality of Life Index (Bankwest 2008) measured the quality of life in 590 local government areas across Australia, ranked against ten criteria, all given equal weighting. Its results showed much higher levels of quality of life in urban areas and again, the popularity with which this liveability survey appeared to be greeted, pointed to a desire for a more nuanced and localized suite of liveability indicators that could be more readily taken up by public policy and planning.

Indeed, the large response from individuals and groups throughout the state to the VCEC inquiry generated significant criticism of existing city liveability measures, including the finding (4.1) that "composite measures of liveability, like the EIU index, are of limited use for Victorians for assessing liveability and for informing policy decisions; although there is a range of liveability indicators available for Victorians to draw on, they are not assembled in a comprehensive fashion to enable easy dissemination of the information; and a suite of indicators can provide information to assess the performance of government programs and policy, and to assist governments, businesses, communities and individuals in decision making".

### 3.3 Translating Urban Liveability Indicators into Policy

The emergence of cities as the unchallenged site of human development for the future and the goal of sustainable development have pushed hundreds of cities around the world to seek better means of assessing urban trends. Many forms of assessment, audit, and indicator systems for guiding and better evaluating the effects of urban development are now in place. However, their utility is still in question (Holden, 2006). For Holden (2009: 430), “the major challenge currently facing the urban indicators movement internationally is to successfully incorporate the collection and reporting of indicators into decision making processes” (see also Michalos 2007; Gahin *et al.* 2003; Sawicki 2002). The urban indicators research community tends to focus on remedying the needs for data, computational methodologies and technology infrastructure for indicators development and use (Wiek and Binder 2005; Wong 2002). Only more recently developed is research into the specific social and political factors that determine whether and how indicators get developed and used, despite widespread recognition that these factors present the biggest barriers to effective application of indicators in any context (Rydin 2007; Herzi and Dovers 2006; Dluhy and Swartz 2006; Reed *et al.* 2006; Eckerberg and Mineur 2003; Besleme *et al.* 1998). Differing types of communities in the urban realm affect the way an indicator system is perceived and consequently sets specific barriers and conditions to its uptake and implementation.

New research into the utility of indicator systems from a community-based perspective can begin from the characterization of indicators and their uses provided by Herzi & Dovers (2006) and Hagerty *et al.* (2001). They both typologize not the population groups using indicators but the types of use to which they are put: instrumental, conceptual, tactical, symbolic, or political. They offer a conceptualization of indicator systems as a bridge between knowledge and policy and posit that the length of this bridge, or the distance of different users from decision-making authority, determines the type of function the indicators fulfill as well as the costs of invoking them.

## 4. Summary

How then to translate the participatory basis of urban community wellbeing indicator systems (Salvaris & Wiseman, 2004) into indices of urban liveability? The description “world's most liveable city” is so familiar that it verges on a cliché. Most of Australia’s urban inhabitants are too busy living their lives to feel any great need to reflect on its meaning – for the city or for them. In any city as diverse as Australia’s capitals, one person’s view is likely to be quite different from another’s, as is their concept of what makes their part of it ‘liveable’ or not. This complexity of liveability was made clear by an *Age*-commissioned survey in 2005 that rated the liveability of Melbourne’s 314 suburbs, then attempted to explain the findings over a week of special features that generated considerable feedback, many noting the survey's 14 criteria excluded many socio-economic indicators while others wondered at the exclusion of factors such as housing affordability, job availability, freeway and road access, proximity to sporting clubs and other hubs of community activity. The study authors explained that the criteria were “chosen to be characteristics of the place, not the characteristics of the people who live within that place” (*The Age*, 27 August, 2005). But the characteristics of

people must be known to answer the obvious question: liveability for whom? Working couples with children are likely to have quite different priorities from elderly retirees, for instance. Good public planning must aim to distinguish between an endless list of wants, which reflect people's status and values, and the key needs that should be met in every suburb.

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## Information Paper 2: Economic Prosperity

### 1. Current policy context and policy measures

Australia's cities are not only home to the majority of people, but also the majority of the economic activity. Nearly 80 per cent of Australia's GDP is produced in our major cities (Major Cities Unit, 2010). In a global environment where developing countries can supply low-skill labour at low wages (with increasingly high productivity), continued prosperity depends largely on the ability of labour forces to adapt. This means expanding services and creating innovating jobs, activities which largely happen in cities.

A broad concern in this regard is the slowdown in Australia's productivity growth. This is troubling when it is considered that over the last 40 years, gains in labour productivity (measured by the value of an hour's work) accounted for more than 80 per cent of the increase in Australia's material living standards.

One part of increasing productivity growth will be investing in physical and human capital. The World Economic Forum's (2009) most recent Global Competitiveness Report ranked Australia only 25<sup>th</sup> for the overall quality of our infrastructure.

Australia faces a shortfall in road and rail transport, and ports, as well as water and energy infrastructure. Private sector estimates of this shortfall range in value from \$445bn to \$770bn. This gap will need to close if we hope to make commuting faster and to move goods more quickly and cheaply (Infrastructure Partnerships Australia, 2009). The Bureau for Transport and Regional Economics (2007) estimates that in our capital cities the avoidable cost of road congestion alone was \$9.4 billion in 2005. Seen to be equally important is investment in human capital. Unless Australians of all ages are able to be educated - from primary school basics to re-skilling adults who are changing professions - there are profound economic consequences, including a decline in incomes and sense of competence.

### 2. Current academic and policy research

Several streams of literature shape urban economic prosperity discourse but these can roughly be configured in three key areas: design, creativity/cultural and knowledge-based.

#### *Design & Prosperity*

The UK's Northwestern Region Development Agency's *Places Matter*<sup>2</sup>, produced a report on the economic value of good design in 2009 that concluded with the following summary:

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<sup>2</sup> [www.placesmatter.co.uk](http://www.placesmatter.co.uk)

- Despite the economic downturn, the importance of design is widely recognised, although it is still necessary to ensure that people understand that design is about more than just the look of a building.
- The study reflects the original report's finding that good design has a positive impact on rental and capital values and, in particular, occupancy and take-up rates, as well as the overall market attractiveness of an area.
- Some see design as even more important during the recession, due to the increasingly selective requirements of both occupiers and property investors and the competitive advantage good design can provide.
- However, others argue that the importance of price has increased, potentially at the expense of good design, and it must be recognised that there will often be costs attached to achieving a higher specification and standard of design.
- Recognising that there are elements of good design that are cost neutral will be an important part of maintaining high standards, particularly in an environment where there are significant cost constraints.
- The public sector has a key role in ensuring that poor design is avoided wherever possible. Developers are under pressure to cut costs, and the public sector needs to make sure that they and wider stakeholders are fully aware of the long-term costs associated with poor design, as well as the benefits of good design.
- Case study analysis suggests that good design can still add value and help schemes to weather the effects of the recession.

A few years earlier, the Commission for Architecture and the Built Environment (2002) produced the well-researched *The Value of Good Design: How Buildings and Spaces Create Economic and Social Value*, drawing together key research from the UK and abroad to show that investment in good design generates economic and social value. Collectively the studies provided solid evidence of the value of design in the areas of healthcare, educational environments, housing, civic pride and cultural activity, business and crime prevention. Looking specifically at business, they cite six compelling examples including:

- According to international architect Norman Foster<sup>3</sup>, when considering the average costs of a building over a 25 year period, the physical envelope of the building comprises only 5.5% of the total cost whereby the costs of occupying the building represent 86% of the total cost. His experience highlights that a small investment in design quality can quickly make a significant impact on this much larger percentage.
- A survey (Rouse, 2000) undertaken for the University of Nottingham of ten major companies that had invested in high quality bespoke corporate buildings in the UK, including British Airways, Boots and Capital One, found that 'employee

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<sup>3</sup> Foster, N. (2001) Speech delivered at the CABI *Building for the future* Conference, London.

satisfaction' and 'functional quality' were the highest rated drivers for investment.

- Pearson (2000) writes that following the award-winning design for an arts and craft studio in Des Moines, Iowa, the company which occupies it has enjoyed a 20% increase in output and a reduction in the time required for handling and transporting products. The savings have been used to enhance employee benefits and for recruitment and retention programmes.
- A study (Hough & Kratz 1983) carried out in Chicago in the early 1980s used a method known as hedonic price estimation to measure the impact of 'good' architecture on rental rates for commercial offices. Using the receipt of architectural awards as the relevant measure of 'good' architecture it found that the rewarded buildings commanded a significant rental premium that could not be explained by other factors. A similar study (Vandell & Lane 1989) was undertaken a decade later using over a hundred high grade office buildings across the United States. Again, the research again found a positive correlation between design quality and market rents.
- The leading writer on office design, architect Frank Duffy (1997), cites the case of Anderson Worldwide whose design investment in their new Chicago office achieved a reduction of 30% in the space that would have been used by conventional layout designs. The overall savings on rent and occupancy levels paid for the initial capital outlay within four years.
- The Property Council of Australia (1999) established a scorecard for measuring the financial performance of commercial urban developments. By looking at 16 developments in detail, they found evidence of a 'design dividend' which can be measured in financial terms.

Sumner (2009) asks three questions:

- Can a place be hardwired to support entrepreneurial activity more than somewhere else?
- Could the way the place is physically designed bring people together to share their ideas and work proactively to develop new businesses and work towards social change?
- Would this make a place inherently more prosperous?

He concludes that if this was the case, then urban design could have an as yet unrecognised economic value. His paper presents research into how urban design can affect a community's ability to act entrepreneurially, investigated through an empirical analysis of the 155 district centres of Greater London. Using self-employment as a proxy for entrepreneurial activity, the analysis tests a potential relationship between self-employment and the spatial configuration of each centre. The research finds that while income shows the strongest relationship with self-employment, in certain low-income neighbourhoods spatial configuration becomes important. The paper concludes

that places that provide the most variety, density and proximity can enable diverse face-to-face interaction in the public realm and overcome the barriers to entrepreneurship that are inherent in neighbourhoods of multiple deprivations.

Macmillan (2006) recognises that although knowledge of the tangible and intangible benefits that arise from good design is growing, better information together with improved valuation methods and a new attitude towards evidence-based design are all needed if the built environment is to reflect the emerging understanding.

### ***Creativity & Prosperity: Cultural Economies***

Murphy (2001) points to three distinct but overlapping conceptions of the role of creativity are embedded in public practices designed to promote urban economic development.

*First, the 'culture industries' have been targeted as sources of jobs and business opportunities. Second, strategies to attract and retain members of the 'creative class' (Florida, 2005) have been advocated as alternatives (or supplements) to attracting firms. Third, 'community development' has been coupled with the arts and related areas as a vehicle to underpin economic vitality and thus to promote social cohesiveness.*

This recent interest in the role of creativity in economic development has sparked a host of conceptual and empirical studies seeking to document the rise of a creative economy, and its socioeconomic and spatial manifestations (for example, Florida, 2002; Grabher, 2001; O'Connor, 1999; Power & Scott, 2004; Pratt, 1997; Scott, 2000). Following from the work of Scott (2000), industries that are characteristic of such an economy represent a blurring of the cultural and the economic; their outputs are valued because of aesthetic rather than solely utilitarian functions. While conglomerates dominate some areas of the creative-economic landscape, creative industries are generally made up of small, agile firms that operate within a networked chain of interrelated activities. Along with creation and production, marketing and distribution are key links of this chain, critical to commodities that rely on capturing (and manipulating) consumer sensibilities (Hirsch, 1972; Pratt, 1997).

The focus on creative industries in national or regional competitive strategies has been attributed to the demise of a Fordist mode of production, which was centred on cost imperatives and secured through a national, Keynesian regulatory regime. With integrated international markets and the advent of new technologies, there has been a search for new sources of competitive advantage. One critical arena for new forms of competition is an economy in which aesthetic qualities play a more prominent role and with an intensified focus on the signs and symbols of commodities (Lash & Urry, 1994). Planned obsolescence and economies of scope have become a means to fix (spatially and temporally) a crisis of over-accumulation through the marrying of the artistic with the technical and the commercial (Jameson, 1984).

Indeed, a number of studies have highlighted the economic significance of creative (or 'cultural') industries in late capitalism, documenting their contribution to employment, value-added production, and exports (Markusen and Schrock, 2006; Power, 2002; Pratt, 1997). Recent studies have also acknowledged that such industries tend to exhibit particular forms of socioeconomic organization, which promote innovation and experimentation. Such forms entail proximate and frequent relations among key actors

along the supply chain (creators, producers, and buyers), as well as among competing actors within a particular field. A spatial concentration of such actors allows for face-to-face contact and the development of localized conventions or established 'ways of doing business', including standards of compensation through 'street rates'. By promoting trust and the exchange of information, these conventions help to reduce the risks of market uncertainty, making experimentation a more viable and worthy venture.

Studies of the creative industries have not only privileged the 'local' as the site for socioeconomic coordination but more specifically the 'urban'. As a constellation of a diverse set of fields, the 'urban' offers firms a range of supporting and complementary services, in addition to institutions (training, research, financial) and a significant pool of specialized workers, all of which facilitate creativity. Such place-based communities are not only a focal point for cultural labour; they are also centres of social reproduction in which cultural competencies are generated (Scott, 2000). In economic (and cultural) geography the interest in creative industries has promoted a reconsideration of the divide between the 'cultural' and the 'economic' (Jackson, 2002; Pratt, 1997). The two spheres are increasingly viewed as mutually constitutive, as industries are subject both to commercial and aesthetic imperatives and to modes of valuation. Such analyses have also prompted a rethink within policy circles of the means to promote and govern such activities. The knowledge-intensive nature of the creative economy is said to be based in a social - rather than material - foundation and, by extension, in a new 'culture' for creative production.

With respect to industrial policy, the cultural economy has generally implied two types of development strategies. The first is the development of social relations (or 'untraded interdependencies') through the promotion of a concentration of key actors and the spaces in which they network. As mentioned above, local ties are viewed as essential for socializing the risks of market uncertainty. This is particularly significant for creative firms, which must anticipate future cultural trends. Such ties can also benefit creative workers, many of whom work part-time or on contract, and need to pool information on labour-market opportunities (Banks et al, 2000; Christopherson, 2002; Pratt, 2002).

A second strand focuses on the significance of 'culture' from the perspective of consumption. It assumes that creativity is embodied in a highly skilled and mobile class of workers, and that the competitiveness of regions rests on ability to attract and retain this class. In particular, Florida (2002) has cited those places with a diversity of cultural 'scenes' and vibrant lifestyle amenities - above and beyond the presence of thick labour markets - as 'creative talent' magnets, suggesting the need for policies centred on 'quality of place' dimensions.

### ***Knowledge-based Prosperity***

Another widely perceived driver of prosperity in contemporary cities is the 'knowledge' industry. The last decade has witnessed a rapid evolution of the 'knowledge city' (KC) concept from early articulations of the 'technopolis' and 'ideapolis' into the 'digital, intelligent or smart city'. The evolution of the concept corresponded to developing a path towards more viable, vibrant, and sustainable form of urban development. In turn, a city following the KC concept embarks on a strategic mission to firmly encourage and nurture locally focussed innovation, science and creativity within the context of an

expanding knowledge economy and society. In this regard a KC can be seen as an integrated city, which physically and institutionally combines the functions of a science park with civic and residential functions. It is claimed to offer one of the effective paradigms for the sustainable cities of the future (Yigitcanlar et al., 2007).

The KC concept appears to have become attractive because it relates to interest among the city administrations in regional development policies, as it emphasises the development and advancement of technologies and socio-economic activities (Oh, 2002). Even though references to KCs can be traced back to about three decades (Ryser, 1994; Knight, 1995) and some ancestral cities have had a strong association with knowledge and wisdom, it was only recently that cities around the world started giving direct attention to knowledge-based urban development (KBUD) (Carrillo, 2004; Ovalle et al., 2004). This latter refocussing of interest of the KC idea not only drew upon the information and knowledge economies but also stressed that vibrant socio-cultural activities associated with conserved rich natural environments, quality built environments, the presence of tolerance and acceptance of multiculturalism, democratic, transparent and visionary governance, and enriched human capital play key roles (Florida, 2005; Baum et al., 2006).

This new concept of KC has caught the attention of international organisations, city administrations, research communities and practitioners during the last few years. Major international organisations such as World Bank (1998), European Commission (2000), United Nations (2001) and OECD (2001) have adopted knowledge management frameworks in their strategic directions regarding global development. This array of strategies indicates the strength of the link that has emerged between knowledge management and urban development (Komninos, 2002; Ergazakis et al., 2006). The significant increase of KBUD strategies for the pursuit of metropolitan competitiveness of region is also evident in city administrations as diverse as Barcelona City (2003), Dublin Chamber of Commerce (2004) and the Victorian Government (2002) on behalf of the Melbourne metropolitan area.

From a research perspective, it has become apparent that the nature of city development associated with activities in the knowledge sector requires conditions and environments which are different from commodity-based manufacturing (Knight, 1995). This understanding has emerged in a variety of KCs (i.e. Austin, Barcelona, Delft, Sao Paulo, and Stockholm) and has been expressed in KBUD frameworks (Larsen and Rogers, 1988; Chatzkel, 2004; Garcia, 2004). In these approaches it is apparent that KCs draw heavily upon the existing cultural and industrial foundations within a city as these act as attractors for knowledge workers. This means these systems emerge as key drivers for the city's development. Yigitcanlar et al. (2008) raise the question as to whether KC development simply requires reshaping a city to act as a knowledge centre, or whether KC development is really part of the innovation and knowledge base associated with the continuing organic growth of the city.

The popularisation of the KC concept has fuelled many localised KBUD strategies and actions within many cities throughout the world, with KCs seen to be playing a fundamental role in knowledge creation, economic growth and development. Edvinsson (2003) describes KC as a city that was purposefully designed to encourage the nurturing of knowledge. The notion of KC is interchangeable to a certain degree with similar

evolving concepts such as ‘knowledge-based clusters’ (Arbonies and Moso, 2002), ‘ideopolis’ (Garcia, 2004) or ‘technopolis’ (Smilor et al., 1988). KC is also seen as an umbrella metaphor for geographical entities, which focus on knowledge creation and covers other knowledge zones such as ‘knowledge corridors’, ‘knowledge harbours’, ‘knowledge villages’, and ‘knowledge regions’ (Dvir and Pasher, 2004). KCs are seen as incubators of knowledge and culture, forming a rich and dynamic blend of theory and practice within their boundaries, and are being driven by knowledge workers through a strong knowledge production (Work Foundation, 2002). As societies become increasingly knowledge-based, the nature of city development changes because activities in the knowledge sector are becoming more important and they require conditions and environments which are very different from those required by commodity-based manufacturing activities in the production sector (Knight, 1995).

Through our review of literature, it has become apparent that there are a number of broad components that form a KC. While it is recognised that every KC is different, and requires different knowledge qualities to grow, there are a number of uniform qualities that generally characterise a KC. For example, in its ‘Strategic Plan of the Cultural Sector’, Barcelona City (2003) lists the major characteristics of a KC as accessibility, cutting edge technology, innovation, cultural facilities and services, and quality education as well as world class economic opportunities. The city embraces diversity and culture to provide civic spaces for activities of the community collectiveness and associations and that foster face-to-face relations. Similarly, Van Winden et al (2007) build upon Barcelona’s KC elements and provide a framework of characteristics that structure a KC. The layers that comprise a KC include:

- *Knowledge base*: including educational institutions and R&D activities;
- *Industrial structure*: affects progress and initial development of a KC;
- *Quality of life and urban amenities*: ensures a KC has necessary; elements knowledge workers are attracted to build a strong knowledge base;
- *Urban diversity and cultural mix*: as an instrument in encouraging creativity; *Accessibility*: encourages and facilitates the transfer and movement of knowledge;
- *Social equity and inclusion*: minimises social disparity and negative tensions;
- *Scale of a city*: larger KCs may tend to offer a greater knowledge pool, greater diversity and choice for knowledge workers and businesses.

The abovementioned foundations of a KC also need a strong ‘organising capacity’ to establish such foundations with a broad partnership of public, private, academia, and community. Establishment of these foundations facilitate the development of ‘knowledge industries’ and ‘human capital’ programs which generate and attract talented workers and business.

### 3. Measures and tools

Much contemporary academic research and debate is now focussed on questions of how best to measure economic activity, economic development and performance and economic well-being. Traditional measures such as gross domestic product, gross regional product and gross national product have been criticised by Stillwell (1999) and Hamilton (1997). These have been designed in part to rectify the anomaly created by many traditional measures of economic activity, which rely on aggregate (or gross) measures that in turn mask significant patterns of variability at the local or household level, especially in terms of prosperity. Alternative measures are often inspired by the success of the Bhutanese conception of 'gross national happiness' and chime also with recent data produced for the Queensland Growth Management Summit which showed that relatively intangible notions of 'lifestyle' were most prominent among the reasons given for why South East Queensland is an enjoyable place in which to live, in contrast to 'economic factors' such as job availability or comparative wage levels.

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## Information Paper 3: Environmental Quality

### 1. Current policy context and policy measures

The year 2009 officially marked the first time in the history of humankind a majority of the world's population lives in urban places. Furthermore, in the course of the present century the number of urban dwellers and level of global urbanisation are both likely to increase. The quality of the urban environment as a living space for the people of the world is, therefore, an issue of fundamental concern for academic researchers, policy makers and citizens.

Various concepts and definitions of urban environmental quality have been attempted including Lansing & Marans (1969) oft-quoted 'an environment of high quality conveys a sense of well-being and satisfaction to its population through characteristics that may be physical, social or symbolic' and Porteous (1971) 'environmental quality is a complex issue involving subjective perceptions, attitudes and values which vary among groups and individuals' What does appear frequently in more contemporary definitions is that overall environmental quality is the resultant of the quality of the composite parts of a given region but more than the sum of those parts - it is the perception of a location as a whole. The composite parts (nature, open space, infrastructure, built environment, physical environment amenities and natural resources) each have their own characteristics and to some extent their quality can be measured. However, overall environmental quality defined as an essential part of the broader concept of 'quality of life' including elements such as health and safety in combination with comfort and attractiveness forms a more meaningful measure of the attractiveness and resilience of a place.

The Commonwealth Scientific and Industrial Research Organisation (CSIRO) conducts important research on the environmental impacts of cities and neighbourhoods through a variety of programmes. One, on creating urban sustainability is focused on,

*helping to revitalise Australia's cities through the generation of new technologies and integrated infrastructure solutions capable of providing a 20 per cent reduction in urban ecological footprints (CSIRO, 2010)*

Other CSIRO projects on urban environmental impacts include:

#### **building processes and performance models:**

- management system for client-demand performance requirements
- integrated whole life suite of management tools
- whole building process and performance models

#### **property investment models:**

- product service life and life cycle inventory database
- property management system
- investment decision-making tools

**human-indoor environment interaction:**

- smart building management system
- smart indoor environment laboratory

**improved water quality:**

- small scale decentralised treatment systems
- higher water quality standards, techniques and processes

**new generation monitoring and control:**

- improvements to monitoring of water quality
- new sensors and control strategies

**new treatment technologies:**

- membranes
- physical and biological systems.

Taken together these projects, some albeit in their infancy, have the capacity to provide valuable insights and data on the environmental impacts of developments within cities and urban areas and to allow the creation of more robust and reliable indicators of sustainability and resilience at the neighbourhood scale.

Urban environmental quality in contemporary Australian public policy discourse is significantly shaped by climate change debates. Australian cities – more so than many cities in developed countries – are vulnerable to the effects of climate change. Our cities are coastal and are subject to the threats of rising seas and storm surges, as well as drought, bushfire and water shortages. The CSIRO suggests that in just two decades the incidence of days above 35°C will rise dramatically, and rainfall in southern and eastern Australia is expected to continue to decline. Predicted climate change could damage buildings and infrastructure, as well as making food supplies less reliable. This has clear consequences for our basic needs, as changes in climate may affect or interrupt the fundamental systems that provide food, water and energy. There are also consequences for health. For example, cities tend to have a large number of elderly people: over 70% of Australians over the age of 65 live in cities. As the incidence of very hot days increases, this group is at greater risk of heat-related illness and deaths. There may also be lifestyle consequences that have psychological impacts. Future city-dwellers may have less access to traditional recreation and social activities, as lakes, sporting fields, and parks suffer from reduced water supplies. Water shortages may also result in the imposition of more restrictions, reducing not only our ability to have a garden, but our choices and sense of autonomy.

It is important acknowledge that for some resources – water and energy, for example – it is possible that in the long term, technology will enable our cities to increase our sustainable supplies. However, this will come at increased cost, and continuing to use resources at current levels will be expensive. The increased financial burden of, for example, desalinated water or clean energy may not seem crippling, but it may make it

substantially harder for some city dwellers to meet their material needs. In addition to adaptation, there is the issue of mitigating our cities' carbon emissions. Australia has committed to reducing greenhouse gas emissions by 5% by 2020, and aims to reduce emissions by 60% by 2050. Achieving these goals will involve substantial change, and will affect aspects of the city which are at the very core of how it operates. This includes how infrastructure networks are organised, the energy sources and building materials used, and modes and means of travel. The shift to creating resilient, low-carbon cities demands more sophisticated understanding of how the three key challenges - population, economy, and the environment - interact in complex ways.

## **2. Current academic and policy research**

### **2.1 Urban environmental quality and human wellbeing**

Van Kamp et al. (2003) revealed that no generally accepted conceptual framework in relation to well-being has been developed, nor any coherent system to measure and properly evaluate aspects of, and trends in, environmental quality. The concepts of urban environmental quality and related terms such as liveability, quality of life and sustainability enjoy great public popularity and form a central issue in research-programmes, policy making, and urban development—or at least they do so in terms of the appearance of these terms in the respective literatures. However, the manifestation of and context in which environmental quality is used in research and policymaking is seldom uniform.

In the UK the Department of Communities and Local Government commissioned a review of local environmental standards and how they might be used to deliver local environmental services at the neighbourhood level (Carmona and de Magalhaes, 2007 & 2009). This work produced, among other findings, a list of 'positive local qualities' or PLQs to amplify the 'cleaner, safer, greener' framework used by government. These PLQs include:

Clean and tidy:	well cared for
Green:	green and natural
Unpolluted:	healthy and comfortable
Secure:	crime and fear free
Safe:	a protective environment
Accessible:	easy to get to and move around
Socially inclusive and fulfilling:	welcoming and cohesive
Economically vital and viable:	well used and thriving
Physically attractive:	visually pleasing

It is worth noting that although this work describes itself as being primarily about local environmental quality, it could just as easily be included under our headings of 'liveability' or 'placemaking'.

Concepts as liveability, living quality, living environment, quality of place, residential-perception and satisfaction, the evaluation of the residential and living environment, quality of life and sustainability do overlap, and are often used as synonyms - but every so often are contrasted. The different concepts find their origin in the various research and policymaking traditions of health, safety, well-being, residential satisfaction and urban physical environment. It is not possible to give an exhaustive review of all approaches, definitions and models within this one information paper, and instead we attempt to offer a broad insight into the diversity of approaches and concepts found. The objective is to gain insight into which concepts are needed to describe urban environmental quality and human well-being within a conceptual model.

## **2.2 Urban environmental quality and quality of life**

The focus on environmental quality has emerged as a key area for research in urban social geography, particularly for research undertaken from an applied or problem oriented perspective. Accordingly, within urban social geography considerable effort has been directed to assessing the quality of different residential environments (Pacione, 1984). Within this field of research, special attention has been afforded to social conditions in large urban areas, with particular interest focused on situations characterised by low levels of life quality.

At least five major theoretical perspectives have been advanced to explain the impact of urban environments on residents. These theoretical perspectives are based on principles of:

- (a) human ecology (Wirth, 1938);
- (b) subcultures (Fischer, 1984);
- (c) environmental load (Milgram, 1970);
- (d) behavioural constraints (Lefcourt, 1976);
- (e) behaviour settings (Barker, 1968).

Each of the theories identifies a particular aspect of urban life and so contributes to an overall understanding. The five theoretical perspectives can be integrated into a general model built around the concept of stress (Figure below, from Pacione, 2003), defined as increased wear and tear in the body as a result of attempts to cope with environmental influences (Bell et al., 1976).

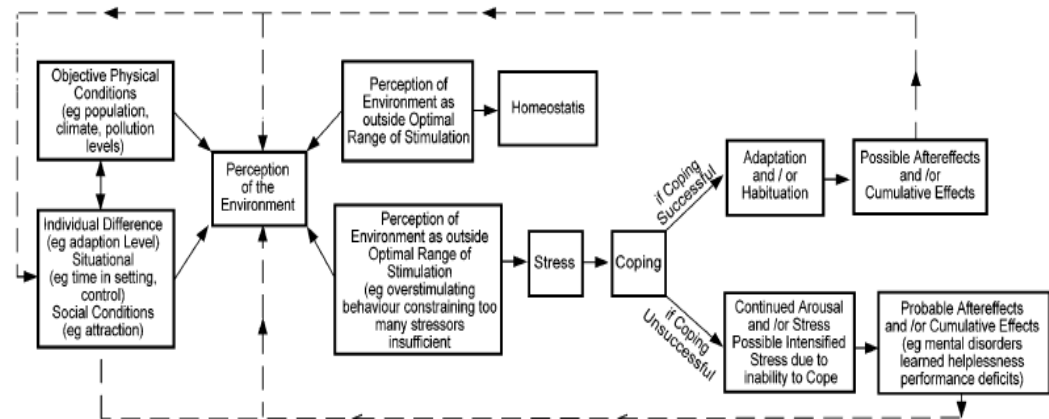
In the stress model, the experience or perception of the city is represented as a joint function of the objective environmental conditions (eg, population density, temperature, pollution levels) and the individual characteristics of the person (eg, adaptation level, previous experience, and time in the city). If the perceived environment is outside the individual's optimal range (eg, if it is over-stimulating, contains too many stressors, constrains behaviour, or offers insufficient resources), stress is experienced which, in turn, elicits coping.

If the attempted coping strategies are successful, adaptation and/or habituation occurs, though possibly followed by after effects such as fatigue and reduced ability to cope with the next stressor.

Positive cumulative after effects would include a degree of learning about how to cope with the next occurrence of undesirable environmental stimulation. If the coping strategies are not successful, however, stress and/or arousal will continue, possibly heightened by the person's awareness that strategies are failing. Possible after effects include exhaustion, learned helplessness, severe performance decrements, illness and mental disorders. Finally, in the model, experiences feed back to influence perception of the environment for future events and contribute to individual differences which affect future experiences.

Four general types of environmental stressors have been identified:

- (a) cataclysmic events—for example, geophysical hazards;
- (b) ambient stressors—for example, air and water pollution;
- (c) stressful life events—for example, death in the family;
- (d) daily hassles—for example, noisy neighbours.



Pacione (2003) A stress model of urban impact.

### 2.3 Applying Environmental Quality Information

Brown (2003) urges a need to move towards a view of urban environmental quality and allied concepts that can draw together, in a practical way, the strands of related work from different fields. Perhaps not so obvious is that an important factor in the usefulness of any such work is consideration of who might use the output and how they might use it. Based on experience in the environmental field, he suggests that one of the major challenges is to bridge the divide between the environmental quality/well-being/quality-of-life specialists and the players who make urban policy and who shape our physical and social environments - in other words the engineers, planners, architects, service delivery specialists, etc. It might be argued that the issue is how to ensure integrated models and concepts improve environmental quality information

available to these key players, but the more immediate issue is how to ensure, if it gets to them at all, can any of it be used? Several propositions are put forward by which environmental quality specialists can hope to maximise the utility of urban environmental quality information and its offspring indicators. Firstly, the environmental quality specialists must understand how urban policy, urban development, and decision-making processes, function. Secondly, they require an understanding of the language, the tools and the thought processes that are used by the development players. Thirdly, they must adopt approaches in which the environmental quality information assists the development players to propose and test scenarios, particularly novel paths of action that could shift urban development in preferred directions.

The debate on sustainable development emphasizes the importance of integrating environmental policy into all policy sectors (Simeonova and van der Valk, 2009). It is increasingly recognized that this integration is needed at both the national and the local levels of governance.

The principle of Environmental Policy Integration (EPI) agreed upon in a number of international and European Union commitments is receiving increasing attention from urban planning scholars. The EPI phenomenon is under-researched and in many countries its implementation, particularly through sub national urban planning mechanisms is hindered by organizational and administrative weaknesses. However, a communicative approach can be used to improve EPI in the urban planning context, by changing organizational structures and the ways in which key actors interact in urban planning processes.

While some countries have accepted and implemented public policies aimed at promoting a sustainable built environment, these measures have had little impact and change has been modest (Van Beuren and D Jong, 2007). The barriers to sustainable development are both general and sector specific. Policy-makers could be more effective in tackling the fragmented nature of the built environment's institutional context. Policy-making theory and past experience in planning suggest that a variety of actors should be included in the policy process, and that their knowledge should be put to good use. Those involved must develop a common understanding of what sustainable building entails, and of how it can be achieved. This requires flexibility concerning goals and procedures. One pitfall is a disproportionate focus on policy processes as against real issues. It is vital that policy processes are prioritized, sustainability presented unambiguously, and practitioners' use of research results closely monitored.

Pickett et al, 2001) have reviewed the role of ecosystems in urban areas and in particular the tensions that often arise when urban development takes places on the fringes of existing cities. Research on ecology in urban systems highlights the nature of the physical environment, including urban climate, hydrology, and soils. Biotic research has studied flora, fauna, and vegetation, including trophic effects of wildlife and pets. Unexpected interactions among soil chemistry, leaf litter quality, and exotic invertebrates exemplify the novel kinds of interactions that can occur in urban systems. Vegetation and faunal responses suggest that spatial heterogeneity is especially important in urban systems. This parallels the concern in the literature on the ecological dimensions of land use planning. The contrasting approach of ecology of cities has used a

strategy of biogeochemical budgets, ecological footprints, and summaries of citywide species richness. Contemporary ecosystem approaches have begun to integrate organismal, nutrient, and energetic approaches, and to show the need for understanding the social dimensions of urban ecology.

These issues are developed by Simon (2008) who reviews current thinking about environment-development issues in the transitional zones between distinctly urban and unambiguously rural areas, known variously as rural-urban fringes, transition zones or peri-urban areas. Contemporary concerns reflect the growing real-world limitations of traditional concepts of a simple rural-urban dichotomy and of the increasing recognition given to concerns with urban food security and small to medium scale agricultural enterprises within urban areas and their fringes.

### **3. Measures and tools**

#### **3.1 Mapping Urban Environmental Quality (UEQ)**

Nichol & Wong's (2009) outline of mapping Urban Environmental Quality (UEQ) describes UEQ as a complex and abstract condition that varies continuously over the urban landscape. Until recently, satellite sensors were unable to capture data in enough detail to represent the fragmented land cover of urban areas. Indeed, a comparative study of environmental quality in Hong Kong (Fung & Siu, 2001) used medium-resolution SPOT images to estimate green space at the generalized level of tertiary planning units. A similar scale study to assess the quality of life in Athens, Georgia (Lo & Faber, 1997) used the NDVI (normalized difference vegetation index) to estimate greenness as well as temperature from Landsat TM images at 30m and 60 m resolution, and data were averaged at the census-district level. Surface temperature derived from satellite thermal sensors has been used to characterize urban heat islands (Roth et al, 1989) but thermal-image data are of low resolution [60 m for Landsat ETM and 90 m for ASTER (advanced spaceborne thermal emission and reflection radiometer)]. Therefore, the majority of satellite-based studies of the urban heat island have been confined to climatological assessments of broad land-cover types at regional (city) scale (eg Lo et al, 1997; Weng, 2001). Maps derived from these studies are at electoral-district level or administrative-district level; thus their utility for urban and environmental planning is limited because landscaping and redevelopment in cities take place at the local scale of individual buildings, blocks, or streets. Recently, a new generation of very high resolution (VHR) satellite sensors such as IKONOS and Quickbird enabled detailed mapping of vegetation (Nichol & Lee, 2005) and detailed temperature products can be derived by the addition of land-cover information (Nichol & Wong, 2005).

Apart from deficiencies in spatial resolution, the mapping of UEQ has been constrained by the fact that environmental quality (EQ) is a holistic concept, comprising numerous parameters that affect urbanites synergistically but are measured on different scales. Therefore, previous studies have involved the use of factor analysis to identify a relationship between one parameter (Fung & Siu, 2000; 2001) or two parameters (Lo & Faber, 1997) derived from satellite images, such as vegetation or temperature, and socioeconomic data, such as population density and income levels. For example, Fung &

Siu's (2000) study of environmental quality in Hong Kong was based on the premise that the NDVI from Landsat data is closely related to other environmental indicators.

The increasing availability of digital map data representing urban infrastructure down to building level, as well as the hybrid raster-vector data handling ability of modern GIS, permit other environmental data to be stored in the same database as image data. Analysis may be done at pixel level, except for discrete data such as building density or socioeconomic data, which are measured within predetermined areal units. Three major constraints to such an integrated analysis include (i) the different units of measurement of the parameters, (ii) their different scales of operation, and (iii) the subjective nature of evaluating UEQ, which precludes absolute accuracy assessment.

### 3.2 Urban Sustainability Indicators

The Major Cities Unit (2010, p.70) *State of Australian Cities* presents a summary table of possible Sustainability Indicators for cities:

Dimension	Key Indicators
Water	<ul style="list-style-type: none"> <li>• Water consumption by sector, Australia</li> <li>• Changes in personal water use in the last 12 months, Capital cities</li> <li>• Households with water conservation devices, Australia</li> <li>• Households with rainwater tank installed at dwelling, Capital cities</li> </ul>
Energy	<ul style="list-style-type: none"> <li>• Australian energy consumption, by industry</li> <li>• Home energy use</li> <li>• Persons taking steps to limit use of electricity, Capital cities</li> <li>• Dwellings with insulation, Capital cities</li> <li>• Awareness of GreenPower Scheme, Capital cities</li> </ul>
Climate change	<ul style="list-style-type: none"> <li>• Net greenhouse gas emission by sector, Australia</li> <li>• Base case projections of direct greenhouse gas emissions for Australian transport</li> <li>• Summary of capital city emission reduction targets</li> <li>• Trend in annual rainfall, Australia</li> </ul>

Air pollution	<ul style="list-style-type: none"> <li>• Exceedence of fine particle health standards, selected cities</li> <li>• Trend in peak ozone levels, selected cities</li> </ul>
Waste	<ul style="list-style-type: none"> <li>• National waste generation by source</li> <li>• Waste generation by state</li> <li>• Per capita waste generation</li> </ul>

As Maclaren (1996) notes urban sustainability reporting is a tool for informing local government, as well as individuals, businesses, and other organizations, about the progress that they are making towards achieving urban sustainability. The reporting process starts with the definition of sustainability goals for the community, followed by a scoping stage. Subsequent steps comprise choosing a conceptual framework for reporting, preparing a list of potential sustainability indicators, evaluating them by a variety of criteria, choosing a final set of indicators, analyzing their results, presenting the results to an intended target audience, and then periodically assessing indicator performance.

Finally, Baycan-Levent et al (2009) argue that green spaces in cities, such as parks, are an essential constituent of urban quality of life. It is noteworthy, however, that some cities have been more successful in implementing a green space policy than others. Their research assesses the complex and heterogeneous supply of urban green spaces by means of a multidimensional evaluation approach, and compares the 'green performance' of European cities. They draw a three-way comparison with the present situation, expressed priorities in decision making and planning, and the success of policy measures as evaluated by experts in the field. Their research examines urban green spaces from the viewpoint of relevant indicators, in particular 'quantity and availability of urban green spaces', 'changes in green spaces', 'planning of urban green spaces', 'financing of urban green spaces' and 'level of performance', in 24 European cities. Their research demonstrates that the mix of indicators used can have significant impacts on the overall performance rating of cities.

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## Information Paper 4: Place Making

### 1. Current policy context and policy measures

The key concepts behind contemporary place making originated in the 1960s, when celebrated urbanists such as Jane Jacobs and William H Whyte offered groundbreaking ideas about designing cities that catered to people, not just to cars and shopping centres. Their work focused on the importance of lively neighbourhoods and inviting public spaces. Jacobs (1961) advocated citizen ownership of streets through the now-famous idea of ‘eyes on the street’ while Whyte (1968) emphasized essential elements for creating social life in public spaces.

Place making remains a relatively unexamined and under-researched area, encompassing a range of practices and professional disciplines, including urban design, architecture, planning, and engineering. Perhaps place making’s most prominent proponent is the New York-based Project for Public Spaces (PPS) whose extensive work throughout North America has extended globally to many other large urban areas. Zukin (2010) has also written recently of the pursuit of ‘authenticity’ in the redevelopment and regeneration of New York’s neighbourhoods, which although often a middle class preoccupation, nevertheless captures the more widespread desire to retain or recreate a feeling of distinctiveness and difference in neighbourhoods otherwise under pressure to succumb to the pressures of global consumer sameness. For PPS,

*‘placemaking is not just the act of building or fixing up a space, but a whole process that fosters the creation of vital public destinations: the kind of places where people feel a strong stake in their communities and a commitment to making things better. Simply put, [p]lacemaking capitalizes on a local community’s assets, inspiration, and potential, ultimately creating good public spaces that promote people’s health, happiness, and well being’.*

Place-making seeks to create places that engender in users a ‘sense of place.’ It is a human perception which raises the centrality of the social dimension to place-making. The human actor is essential in transforming mere space to place. Place-making meets the need of sense of place not as a set of prescriptions but as a principle of endless realisations. It is a guiding principle rather than a model. Nevertheless, Hebbert (2009) has included procedural theory as well as practice to principles in a state of the art review of place making, specifically in relation to climate change although it clearly has wider implications. Most importantly, he demonstrates how a scientific impetus to optimise the resilience of buildings is not necessarily conducive to good place making even though ‘you cannot have a safe building without a safe community in which to build it.’ (Hebbert, 2009: 368)

Hence, place making has emerged increasingly as the ‘brand’ name for both designing and assessing *quality and/or sense of place*, to which this paper now turns its attention.

In urban planning policy, place-making has typically come to be associated with initiatives to create and revive the public domain (see Hamdi 2010). In terms of assessing the effectiveness of the public domain, benchmarking has mainly been applied to community services and community development (primarily through establishing standards or benchmarks of service delivery) and in urban “design” (physical design standards)<sup>4</sup> and increasingly in ecological sustainability<sup>5</sup> where performance is measured against standards external to the organisation.

All public places are different. In addition to unique physical characteristics, public domains and their performance reflect their position in the urban field and public domain network, the economic character of the city, the cultural and social character of the society and the way the public domain is managed. The unique qualities of every place in the public domain makes direct comparison of performance between public domain places in different cities difficult and of limited merit. Measuring the performance of the public domain is likely to be most productive when it is used internally, e.g. to measure a public domain’s performance against the adopted public domain goals or to compare the performance of a number of public spaces under the manager’s care.

Public domains play a vital role in the social and economic life of communities. In a summary of research projects undertaken in England and Wales over the past decade, Worpole & Knox (2008) from the highly respected Joseph Rowntree Foundation explored how people use both traditional and new public spaces, and how these places function, often successfully, sometimes not. Their key findings offer a useful summary of the value of place-making endeavours:

- Public spaces (including high streets, street markets, shopping precincts, community centres, parks, playgrounds, and neighbourhood spaces in residential areas) play a vital role in the social life of communities. They act as a ‘self-organising public service’, a shared resource in which experiences and value are created. These social advantages may not be obvious to outsiders or public policy-makers.
- Public spaces offer many benefits: the ‘feel-good’ buzz from being part of a busy street scene; the therapeutic benefits of quiet time spent on a park bench; places where people can display their culture and identities and learn awareness of diversity and difference; opportunities for children and young people to meet, play or simply ‘hang out’. All have important benefits and help to create local attachments, which are at the heart of a sense of community.
- The success of a particular public space is not solely in the hands of the architect, urban designer or town planner; it relies also on people

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<sup>4</sup> Physical Design: Brisbane City Council *Desired Standards of Service* (2007); South Australian Government *Community Planning Standards*.

<sup>5</sup> Sustainability: Green Building Council of Australia’s ‘Green Star’ rating system; Canada’s BEPAC (Building Environmental Performance Assessment Criteria) program.

adopting, using and managing the space – people make places, more than places make people.

- The use of public spaces varies according to the time of day and day of the week, and is affected by what is on offer in a particular place at a particular time. In one town centre studied there was a clear rhythm to the day, with older people shopping in the central market early on, children and young people out at the end of the school day, and young adults dominating the town centre at night.
- Some groups may be self-segregating in their use of different public spaces at different times, with social norms affecting how and whether people engage with others. Public spaces are a particular and distinct resource for young people looking to socialise with others. However, groups of young people are sometimes perceived as having antisocial intentions, which in many cases is simply not true.
- Retailing and commercial leisure activities dominate town centres, and though public space can act as a ‘social glue’ the research found that in some places the society that is being held together is a stratified one, in which some groups are routinely privileged over others. So, for instance, young and older people are discouraged from frequenting shopping areas by lack of seating or (for groups of younger people) by being ‘moved on’.
- The research challenges several current government policy assumptions concerning public space. The ‘urban renaissance’ agenda appears too concerned with matters of urban design, as well as being distinctly metropolitan in character. The majority of public spaces that people use are local spaces they visit regularly, often quite banal in design, or untidy in their activities or functions (such as street markets and car boot sales), but which nevertheless retain important social functions.
- The research questions whether the government’s emphasis on crime and safety in public spaces is depriving them of their historic role as a place where differences of lifestyles and behaviour are tolerated and co-exist. What is considered ‘antisocial behaviour’ may vary from street to street, from one public situation to the next, or from one person to the next.
- It is also important for policy-makers and practitioners to recognise that so-called marginal or problem groups, such as young people, or street sex workers, are also a part of the community. Definitions of ‘community’ that exclude particular groups are of questionable legitimacy in the long term.
- Regeneration strategies or policing approaches intended to ‘design out crime’ can end up ‘designing out’ people. Approaches that strip public spaces of all features vulnerable to vandalism or misuse actively discourage local distinctiveness and public amenity.

## 2. Current academic and policy research

### 2.1 What is Quality of Place?

Marans (2003) defines place as being the communities and neighbourhoods where people live as well as the community amenities and environmental conditions associated with those places. It should also be noted that it is the places that people work, study and recreate; where through urban form, these places have been separated from the communities in which people live. In considering place, concepts such as place attachment, sense of place and place identity are evoked, each related but different in their consideration of place (Ayatac & Turk, 2009). Through urban planning and design; governments, professionals and communities use these concepts and deliver quality places that meet community needs through a range of policy tools, development programs and place-making activities. Quality of Place (QoP) is a term used to describe the achievement and measurement of those places (Ayatac & Turk, 2009). It is frequently intertwined with discussions of Quality of Life (QoL), particular when considering the issues of community need. Where QoP differs from QoL, is that QoP tends to be more place specific, although in several of the cases reviewed this distinction is either very subtle or unclear.

There are a variety of definitions of Quality of Place (QoP), each with particular nuances depending on the context of their application. One of the most recent definitions of QoP is from the United Kingdom, where QoP indicators are currently being developed as part of an ongoing process of policy and program development focusing on the quality of urban design outcomes in communities. There it is defined as “the physical characteristics of a community that affect the quality of life and life chances of people living and working in it” (Cabinet Strategy Unit, 2009, p.4). Andrews (2001) also relates place to QoL by defining QoP as “an aggregate measure of the factors in the external environment that contribute to quality-of-life (QOL)”, which he describes as “a feeling of well-being, fulfilment, or satisfaction on the part of residents or visitors to that place” (Andrews, 2001, p. 217). He finds that operationally there are two components to QoP: the range of qualities; and the types of places that are of interest. How people feel in or about a place is vital to QoP, as while physical factors can support a place in achieving QoL, the actual quality of the place is more than the sum of its physical elements.

### 2.2 QoP Indicators

Measuring the quality of a place through QoP Indicators has a number of applications depending on the scale of measurement and the type of indicators used. Often QoP indicators are used for comparison purposes, measuring and comparing the places, usually at the level of a city or large region. Examples of this use of indicators for comparison include the *Places Rated Almanac* series of publications; Florida’s work on the ‘creative class’; and a multitude of liveability styles surveys ranking cities around the world (Places Rated, 2009; Florida, 2000; Andrews, 2001). Indicators can also be developed as tools for assessment of proposed development or for measuring the operational performance of an existing area (Hurley & Horne, 2007).

Measuring QoP using indicators can assist in guiding and reviewing public policy by providing an assessment of the outcomes of policy implemented, whether at a macro or

micro scale. Hurley and Horne (2007) suggest a “principles to indicators” approach, where indicators are linked to policy principles and are evidence based, with measures included for feedback into the process for design and assessment of indicators. The form of the indicators depends on their intended purpose, which should be clearly defined at the outset to ensure that they are developed within the appropriate frame. While measuring achievement of a set of project objectives over time is useful as a reporting tool, it is valuable to use that measurement to review the implementation of public policy. This in turn informs the ongoing application of that policy, helping to determine how successful public policy is in achieving quality of place.

### **2.3 Factors considered in the QoP Indicators**

In reviewing existing QoP indicators it is clear that most are focused on matters that are typically also measured in some form by QoL indicators including transport, education, health services, employment, open space, and housing. The focus in the QoP indicators is then generally around access to those elements. At a broad scale, some have focused on issues relating to physical growth, social quality, environmental quality and governance, often taking an economics approach (Hanna & Walton-Roberts, 2004). The economy as a driver for considering quality of place, features strongly in Florida’s work and that of those focusing their attentions on the ‘creative classes’. Factors considered in those analyses focus heavily on the ‘3 T’s of technology, talent and tolerance’; the presence of a rich cultural scene, and the high concentration of people working in cultural occupations (Trip, 2007; Clifton, 2008). In Trip’s 2007 analysis of Amsterdam, Rotterdam and the Netherlands based on Florida’s popular “creative class” theory, QoP indicators used included:

- Creativity and talent
  - Creative class
  - Human capital
  - Employment in selected cultural industries
- Diversity, tolerance and safety
  - Bohemian index
  - Gay scene
  - Foreign-born
  - Perceived safety
  - Crimes
- Specific amenities
  - Access to nature areas
  - Access to inland water
  - Access to coastal areas
  - Image and “coolness”

- Catering and nightlife – restaurants, cafes, discos and nightclubs
- Culture and education – theatres, museums, cinemas, high education
- Sports – keep-fit centres, tennis courts, swimming pools
- Recreation areas – parks, sport fields

While some of these elements do include specific place-based references such as parks and restaurants, largely these indicators do not directly relate to place at the local scale. Elements of these QoP indicators can be translated to a smaller scale such as a neighbourhood analysis, however, largely they relate to the broader, city-scale analysis undertaken when comparing cities.

Other studies focused on economic elements of place have included indicators such as the value of residential property, owner occupancy rate, tax delinquencies, and mortgage lending rates (Ghose & Huxhold, 2002). This type of approach, while using objective quantitative data, appears to be constructed on value judgements on the quality of a place based largely based on the financial circumstances of its occupants. While these factors may or may not be related to other aspects of the quality demonstrated by a place, they relate more to the QoL of its occupants than the qualities of a place.

In its recent work on QoP, the UK government has categorised the factors affecting quality of place under four broad headings, and suggest that high quality places tend to perform strongly across all of the elements:

- Range and mix of homes, services and amenities
- Design and maintenance of buildings and spaces
- Provision of green space & green infrastructure
- Treatment of historic buildings and places (Cabinet Strategy Unit, 2009)

As yet, this work has not been formulated into QoP indicators. This is a source that should be monitored given the high quality of work undertaken in the urban design field by the UK to date, which is based on 7 widely used objectives of urban design (CABE, 2000). Taking a “principles to indicators” approach discussed earlier, it is appropriate to consider developing QoP indicators based on these urban design objectives, which are:

- Character—*a place with its own identity*
- Continuity and enclosure—*a place where public and private spaces are clearly distinguished*
- Quality of public realm—*a place with attractive and successful outdoor areas*
- Ease of movement—*a place that is easy to get to and move through*
- Legibility —*a place that has a clear image and is easy to understand*

- Adaptability –*a place that can adapt itself to new needs*
- Diversity –*a place with variety and choice.*

Assessment of aesthetic quality is generally considered to be a subjective judgement, making indicators on this topic problematic. Judgement of the visual appearance of places, particularly those designed according to a set of design criteria from a particular era or style, can be affected by the differences in taste and style of those making the assessment. Forsyth and Crewe (2009) argue that style should not be allowed to affect the judgement of aesthetic qualities, as while a style may go out of favour, its aesthetic qualities are a separate matter.

Alternative tools to QoP indicators for assessing aesthetics have been developed as consultative processes that engage the community in assessing local QoP. Again, the UK government has taken an active role in this regard, with the Commission for Architecture and the Built Environment (CABE) developing tools and programs including *Placecheck* and *Spaceshaper*. While these tools do not explicitly state that they are for QoP assessment; their purpose, process and outcomes provide an assessment of the quality of a place and include a strong focus on aesthetics as well as function. The *Spaceshaper* tool is used for community workshops to measure the quality of space and includes 41 characteristics grouped under the following headings:

- access: finding your way and getting about
- use: what activities and opportunities the space has to offer
- other people: how the space caters for different needs
- maintenance: how clean and cared for the space is
- environment: how safe and comfortable the space is
- design and appearance: what the space looks like and what it's made from
- community: how important the space is to local people
- you: how the space makes you feel.

These characteristics combine consideration of both physical elements of place and the psychological aspects of how places make people feel.

## 2.4 Quality perceptions

Places measured as having access to a range of services, open space of a certain size, and a mix of land uses are not necessarily quality places. They may be a good location and 'on paper' appear to be a good place, however the quality of the place as experienced by people living, working, studying and visiting the place may be quite different. There is a

set of issues and experiences that influence whether people perceive it to be a quality place. Place, as a concept, has attached to it a range of more personal experiences, values and feelings. These include intangible aspects such as authenticity and sense of place, which are unquantifiable and that may be present in some places, and not others, regardless of how attractive a place may be (Trip, 2007). Others see quality of a place as multidimensional, with its perceived quality differing between individuals, who also have changeable preferences (Smith, Nelischer & Perkins, 1997 & Andrews, 2001).

The different needs and desires of individuals can impact on their assessment of QoP and that assessment may also vary at different times. For example, the perception of QoP for a child is different to a teenager, to a young adult, to a mother, to a retiree, to an elderly person, and to a person with a disability. Some of the qualities may be similarly valued, while some things may be diametrically opposed i.e. (using stereotypes) a young person may highly value a vibrant place with mixed uses and after hours activity, while an elderly person or young mother may not value such a place and find it disruptive. This perception of QoP can also vary within the one individual over time, as their needs and perceptions change throughout their various life stages.

The time dimension also relates to the wider issues of the “times” in which people live. As acknowledged by Andrews (2001) perceptions of QoL are linked to QoP, particularly in “good times”, when consideration of QoL expands to include QoP factors such as access to amenities and the quality of the local environment. He suggests that in “bad times” the focus of most people is on the fundamentals of employment, food shelter and security and that matters such as the aesthetic quality of places have a lesser importance. It is important to acknowledge that such a hierarchy may be present and to understand the context of the “times” in which QoP indicators are developed and measured.

What constitutes a quality place also presents an interesting dilemma between the theory of what a good place is, versus what the occupants feel are good places. As discussed above, this varies depending on the individual. Some people value slower traffic, pedestrian environments while others value ease of vehicular movement. Professional judgement and latest planning or urban design theory of what is believed is best for people may not equate to what people actually value. In the development of indicators it is appropriate to explicitly state what assumptions have made and qualify what they are based on so that they are clear and defensible.

### **3. Measures and tools**

#### **3.1 Objective and subjective indicators**

QoP indicators by their nature are subjective. While some can be objectively measured such as quantitative indicators, the process of selecting some indicators over others as being factors that influence QoP involves the interplay of values and judgement. A key example of this is the focus of the ‘creative class’ movement and the resulting selection of certain QoP indicators. Those indicators, as outlined earlier in the work by Trip (2007), place a particular emphasis on types of employment and people as contributing

to QoP, as distinct from some of the other indicators outlined by Ayatac and Turk (2009).

The selection of different sets of QoP indicators could yield different results for the same area depending on the focus. For example some studies focus on indicators that relate to matters such as home ownership, income, mortgage rates and so on. In those cases the assumptions appear to have been made that places where people can afford to own a home or have higher income are better quality places than areas that do not. Measured differently, perhaps considering aspects related to people's connection to local places, quality and use of public spaces, and level of street life; the place may fare very differently. The differentiation between subjective and objective needs to be considered very carefully and it should be acknowledged that just because something is easily measured it does not mean that it is objective in its application.

There are some examples where combinations of objective and subjective measures have been used including the Detroit Area Study (Marans, 2003). Alternative routes to evaluating the quality of environments include experiential cognition and embodied observation. These are different ways of seeing and 'measuring' quality by incorporating an individual's own perceptions in addition to physical observations (Alcantara & Rheingnatz, 2007). Also, once values are assigned, it may be possible to utilise technology, such as GIS and remote sensing, to measure elements such urban vegetation, thus providing some objectivity to a subjective matter (Ozbakir, 2008). Other tools are also available such as *Placecheck*, which is a tool for assessing the qualities of place with the community. This tool provides an extensive list of elements to be considered, however it relies on a qualitative assessment. Tools such as this provide a basis for the further development of QoP indicators, and this work is currently being undertaken by the UK government, as discussed previously.

### **3.2 Combining physical elements and quality criteria**

Developing QoP indicators that have the ability to assess the real quality of a place and not just what it has access to or quantities of, requires the combination of considering the physical elements that comprise the place and the qualities that are attached to them. One approach to doing this has been undertaken by Smith, Nelischer and Perkins (1997), who have used a matrix approach. They undertook a literature review of quality principles derived from social and psychological theories and physical form criteria summarised from professional publications. Their review included prominent theorists on place and urban design including Lynch, Calthorpe, Alexander, Katz and Gehl. It resulted in an extensive list of 197 specific physical form criteria and a set of quality and needs principles. Their approach was to develop a matrix of these two elements where they then assessed the relationship between each of the quality principles and the physical form elements. Based on this assessment a tally was taken to determine which physical form elements had the greatest impact on achieving the quality principles, and which quality principles were most influenced by physical form. This information was then used to analyse the performance of places within Toronto against those elements.

The strength of this approach is that it acknowledges both the role of physical form and the needs and qualities attached to place, and provides a method of assessing their

relationship. This can then highlight those areas that may have the most benefit and that should be pursued for the development of QoP indicators. The assessment may vary between existing communities and new communities and so it may be necessary to undertake the process for each, reflecting the different needs and circumstances. The approach does involve subjective assessment of the relationship between the elements, however that process could be undertaken in a way that harnesses multiple viewpoints to aim to capture some of the diversity of views in the community.

Other more practice-oriented tools for placemaking are dominated by the influence of PPS who have identified 11 key elements in transforming public spaces into vibrant community places, and calls these placemaking principles<sup>6</sup>:

- The community is the expert
- Create a place, not a design
- Look for partners
- You can see a lot just by observing
- Have a vision
- Start with the petunias: experiment, experiment, experiment
- Triangulate
- They always say “It can’t be done.”
- Form supports function
- Money is not the issue
- You are never finished

They also provide a well-founded evaluative tool<sup>7</sup> developed to help communities evaluate places. Based on a circular model, an inner ring represents key attributes of places, the middle ring intangible qualities, and the outer ring measurable data.

#### 4. Summary

There are some key lessons from this information paper on place making issues, measures and tools to be learnt and applied within the Australian context:

- Clarify the purpose of the indicators and how they are to be used – *is it for comparing places, for reporting and/or for reviewing and influencing policy*
- Determine the scale of place to which the QoP indicators will apply – *this affects the type of indicators used and the methods of measurement; if different scales are proposed multiples sets of QoP indicators may be required*

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<sup>6</sup> <http://www.pps.org/11steps/>

<sup>7</sup> [http://www.pps.org/what\\_is\\_placemaking/](http://www.pps.org/what_is_placemaking/)

- Crossover with QoL and other indicators – *consider the content of other existing and proposed indicators and develop complementary QoP indicators to avoid duplication*
- Focus on QoP indicators that relate directly to place – *broader indicators should be addressed by QoL and other indicator sets*
- Aesthetic indicators should focus on quality of aesthetics and not style – *this is particularly important for measuring QoP in existing areas*
- Engagement of the community in establishing and measuring QoP should be strongly considered – *this is particularly important within established areas in the case of infill or renewal development*
- Varied feelings about the quality of place need to be acknowledged - *harness a diversity of views in the determination and assessment of QoP, particularly from the community, and be prepared for views to change and to be different from the view of professionals*
- Consider the impacts of broader societal issues on the consideration of the importance of place - *be prepared for interest in QoP to change in response to external issues*
- Acknowledge the value of subjective elements in QoP - *explore alternative means of assessing QoP indicators for subjective matters where quantitative data may not be appropriate*
- Make the assumptions about what quality of place is clear - *views on what it is will vary between individuals and over time, clarifying this is needed for consistency of communication and measurement over time*
- Do not base selection of QoP indicators on the availability of data or ease of measurement – *select indicators based on achieving the principles*
- Use a matrix approach of physical elements and quality criteria to identify issues for indicator development – *use a framework to provide a logical and justifiable approach to indicator selection*

Finally we note the significant overlap in the literature on place making with the well established literature of community development. Whilst this is sometimes theoretical and aspatial, the more practically oriented work recognises the significance of place and the importance of working with local groups and organisations to develop locally specific strategies and practices.

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## Information Paper 5: Urban Governance

### 1. Current policy context and policy measures

Urban governance can be defined as the sum of the many ways individuals and institutions, public and private, plan and manage the common affairs of the city. It is a continuing process through which conflicting or diverse interests may be accommodated and cooperative action can be taken. It includes formal institutions as well as informal arrangements and the social capital of citizens. The Global Campaign on Urban Governance ([www.unhabitat.org/governance](http://www.unhabitat.org/governance)) proposes that good urban governance is characterized by a series of principles, which are interdependent and mutually reinforcing.

Australian urban governance reflects its multi-layered, multi-tiered system. Stilwell & Troy (2000) drew attention a decade ago to the tension between the differing powers of the national and state governments, a tension deeply embedded in Australian history, and continuing to bedevil attempts to plan the development of more efficient and equitable cities. The powers of the central government might be constitutionally constrained, but its economic dominance, based on having the lion's share of tax revenues, provides the capacity in practice to have ever greater influence. The extension of powers has sometimes been accommodated by a cooperative response from the states, but commonly has been resisted as an intrusion into their rights and responsibilities, including for the provision of urban services. The result has been a tendency for spatial inertia, frustrating the potential for more systematic or ambitious planning of urban and regional development. The fragmentation of local government and its general subordination to the states compounds this tendency.

In Australia, the Commonwealth Government has traditionally taken a low key role on the urban front. While decisions made by the Commonwealth have always had an impact on the way that our cities develop, up to now these effects have mostly been the consequences of other policies such as immigration, industry and taxation. Some sporadic bursts of interest, such as the Whitlam Government's urban and housing initiatives and the Hawke/Keating Government's *Building Better Cities* program, have been exceptions (Gleeson, 2007). As a result, governing Australia's cities came to be a settled two-player game with a degree of certainty in how the game would be played. The dynamic between state and local governments on matters related to city development, while not necessarily smooth, was a simple two way transaction where state governments generally had the fiscal and legislative upper hand.

However, the urban governance dynamic has now shifted. Since its election, the Rudd Government explicitly stated that it wanted to be involved in governing cities (Rudd, 2009) and it has begun to take action to realise this desire, most noticeably through a series of policy measures and new institutional arrangements.

### National Objectives and Criteria for Future Strategic Planning of Capital Cities

Through COAG, the Commonwealth Government obtained agreement to criteria which all states' city strategic plans must comply by 2012. The Commonwealth intends to link all infrastructure spending to adherence to these criteria.

### Building Australia Fund (BAF)

The BAF was established to help fund states' large scale road, rail and port projects, with \$8.4 billion allocated in 2009. While not exclusively for cities, a key objective of this funding is to 'improve the functioning of and quality of life within our major cities and major regional centres' (Albanese, 2008). Previous Commonwealth infrastructure spending focused on links between cities rather than within.

### Major Cities Unit

The 'Major Cities Unit has been established to identify opportunities where federal leadership can make a difference to the prosperity of our cities and the wellbeing of their residents' (Infrastructure Australia, 2010).

The Commonwealth's new found urban boldness is likely to have important consequences for the urban governance dynamic and therefore, at least eventually, for cities themselves. Australia has long been an urban nation with the majority of people living within cities, so it is surprising that the Commonwealth has not previously shown more interest (Gleeson, 2007). The somewhat belated new interest has undoubtedly been sparked because cities continue to grow rapidly and are capturing an increasing percentage of the national population. As a result, cities are expanding spatially, requiring more and larger capital projects to move more people and freight further distances. Essentially this means the urban governance task is getting larger too, creating the problem of state and local government's urban policy challenges outgrowing their ability to respond. The Commonwealth, with its greater fiscal capacity and spatial reach, may seem to many observers better equipped to meet such challenges.

The recent change of government and the tentative alliance with the country Independents has shifted the focus of attention somewhat from the urban and metropolitan to the regional and it remains to be seen how issues of metropolitan and neighbourhood governance and dealt with in policy terms.

Australia's urban governance has also resisted some apparent trends in other regions. Globalisation has not resulted in an upscaling of governance to the extent seen in Europe, where a supra-national government - the European Union - has influence in urban governance (Newman & Thornley, 2004). Equally, the combination of economic liberalism and globalisation has not resulted in wholesale urban governance decentralisation as theorised and/or observed in regard to other nations (see Brenner, 2004; Hackworth, 2007). Such a scenario would see power polarised to the two extremes of local and global priorities. Salet et.al. (2003) note that cities overseen by arrangements which include an intermediate government have fewer problems of internal coordination. Australia's intermediate level of government, States and Territories, remain relevant and are therefore well placed to mediate between global and local perspectives (Cavallier, 1998).

## 2. Current academic and policy research

### 2.1 Shifting Theories of Urban Governance

Kearns & Paddison (2000) identify several ways in which the urban context has changed to challenge urban management and has helped to give rise to urban governance. The most momentous shift has been towards economic globalisation involving mobile capital investments, the emergence of world-wide economic sectors, international institutions and the emergence of global spectacle. For urban governments, this has meant a loss of control over urban economies, and new activities and responses. Several distinct changes pertaining to urban governance can be identified. First, interurban competition has become fiercer, with cities trying hard to 'sell' themselves for a number of investment and other reasons in what has been termed 'place wars'. Secondly, and as part of this competition, homogenising global culture is accompanied by simultaneous attempts to develop a city's local, distinctive culture to attract business investment. Culture itself has been increasingly commodified in an attempt to attract tourism and inward investment. Thirdly, cities have viewed national governments as less able to help them and less relevant to their fortunes.

Macleod & Goodwin (1999) identify a proliferation of theoretical approaches, which have sought to uncover the changing form and governance of cities and regions. They provide a critical review of some of the more influential of these debates that have sought to analyse: the central–local relations of government; the growing influence of 'regimes' and 'growth coalitions' in energizing urban economies; and the rise of the 'learning' or 'institutionally thick' region. The authors argue that, although providing valuable insights, these theories suffer from: 1) a failure to integrate analytically into their inquiries a relational account of the state, and thereby to neglect the state's influence in actively shaping the urban and regional fabric; and 2) a similar failure to problematize the issue of scale, often taking for granted the spatial context of their own particular inquiry.

Over the past two decades, scholars have reported significant shifts in the purpose and practice of metropolitan spatial planning as a response to processes of spatial restructuring in urban regions (Salet et al. 2003). One such transition was that from urban managerialism to urban entrepreneurialism (Harvey 1989). A further shift that has been extensively debated is the emergence of spatial strategy making over older models of land-use blueprinting or spatial planning (Albrechts et al. 2001; Madanipour et al. 2001; Healey 2004). Others have argued that we have seen a phenomenon of 'splintering urbanism' emerging in many city regions resulting from fragmented governance and private management of infrastructure under globalised neoliberal conditions (Graham & Marvin 2001).

Australian cities experienced extensive spatial restructuring during the past two decades (Baum 1997) and since the late-1990s have seen a revival of interest in metropolitan planning and plan making from which new strategic planning documents have emerged (Gleeson et al. 2004). The uniformity of this resurgence across Australia's major cities seemed to suggest a new period in which strategic urban spatial planning had achieved a new significance, in parallel with developments elsewhere (Healey 2004). There is evidence that since the mid-2000s this revived interest in greater metropolitan strategic

oversight is being replaced by a vigorous new emphasis and focus on large-scale urban infrastructure as a solution to urban problems. While the crop of new Australian metropolitan spatial plans of the 2000s remains in effect, the significance of their spatial coordinating function has withered in favour of a surge of new urban investment schemes that emphasise large, complex and fiscally demanding infrastructure projects. There has been a weakening of the influence of planning agencies in shaping metropolitan policy, in favour of infrastructure departments and ad-hoc engineering project ‘investigations’. In addition there has been a very recent intensification of national interest in urban issues, but in contrast to previous sporadic national-scale efforts the current raft of Federal urban initiatives is largely devoid of land use considerations; instead urban infrastructure projects will form the overwhelming bulk of the new Federal engagement.

## **2.2 Infrastructure and urban spatial planning**

The softening and shift away from strategic spatial planning has been sufficiently consistent across Australian cities that it can be considered to mark a new ‘infrastructure turn’ (Dodson, 2009) in Australian urban planning. The ‘infrastructure turn’ raises considerable questions for urban scholars about the role of land-use planning in contemporary Australian cities, and in turn, for cities elsewhere. Such questions range from identifying the potential risks – and potential benefits – of conceiving and planning metropolitan areas primarily through an infrastructure frame, to asking whether infrastructure projects alone can perform the broader strategic spatial functions of planning, such as the achievement of socially equitable and environmentally sustainable cities? Might Australian cities be witnessing a new mode of urban planning characterised by ‘spatial engineering’? If this is the case what might the wider consequences be for cities elsewhere and for our new understanding of spatial planning and spatial strategy making?

At a more fundamental level, Graham & Marvin (2001) question the longer term consequences for the urban coherence of cities from an infrastructure focus. Australia is by no means the only jurisdiction where intensive and accelerating infrastructure development is taking place. Understanding the Australian shift away from a broader, and arguably more nuanced, conception of metropolitan planning as a spatial strategy may offer insights for cities and urban regions in other nations. Further questions may be posed, (Flyvbjerg et al., 2003), as to whether an urban spatial planning approach dominated by individual infrastructure megaprojects can alone address such pressing new challenges for cities as climate change and declining petroleum security (Dodson & Sipe 2007). Rather than a set of individual component megaprojects perhaps we are now entering an era of the city as a constellate infrastructure ‘giga-project’. What might the emergence of such an awesome new urban entity imply for urban – and global – sustainability? Dodson (2009) provides an historical review of the literature on the relationship between urban infrastructure and metropolitan planning, with a focus on the Australian context. Using documentary and empirical cases studies of strategic spatial planning in two Australian cities – Melbourne and Brisbane – he evaluates the transition from the spatial strategy revival to the contemporary ‘infrastructure turn’.

Most historical perspectives on general and specific instances of urbanisation incorporate an implicit understanding of the role of technical systems and infrastructure networks in

shaping urban patterns. Hall's (1998; 2002) urban and planning histories have paid extensive attention to infrastructure as the technical and physical underpinning for modern urbanisation. Yet, as Graham & Marvin (2001) argue convincingly, urbanists in recent decades have failed to raise and address questions about the role of infrastructure in debates about urbanisation in favour of broader political, economic, social or environmental concerns. All too frequently, they charge, analyses of urbanisation have tended to downplay the often intimate, complex and intense relationships between urban patterns and constituent infrastructure. Star (1999), for example, argues that infrastructure is a category that is subject to the same biases as other socially constituted typologies. Because infrastructure in the form of hydraulic, energy and transport networks typically forms the essential 'connective tissue' of a city, some argue these networks should be conceived as a component of a greater and often more complex urban 'socio-technical' system (Tarr & Dupuy 1988). This system may involve more than simply the use of technical networks; multiple arrays of socially complex practices, interactions, relationships, dependencies and interactions within and through infrastructure pervade contemporary urban life.

The recent recognition of the significance of infrastructure in constituting and facilitating urban life has produced a resurgence in attention from urbanists investigating the economic (Torrance 2008), social (Graham 2000) and cultural (Kaika & Swyngedouw 2000) role of infrastructure within cities. Yet, despite this renewed interest in the role of urban infrastructure in shaping urban conditions there have been relatively few attempts to re-inscribe this new appreciation upon metropolitan spatial planning thought or practice, or on spatial strategy making. This may be because the new attentiveness to the wider significance urban infrastructure has emerged outside of planning inquiry, in fields such as socio-cultural geography and architecture (Graham & Marvin 2001), theoretical sociology (Gökalp 1992; Coutard 1999), anthropology (Star 1999) or critical social history (Tarr & Dupuy 1988). Planning has had relatively sketchy contact with this literature and until recently there have been few attempts to assess what these perspectives offer for the management and coordination of metropolitan systems.

The problems identified by Graham & Marvin (2001), Flyvbjerg (2003), McFarlane & Rutherford (2008), among others, indicate the need for a re-assertion of spatial planning as a strategic practice of intervention, management and coordination within urban regions. Questions of urban governance under urban spatial restructuring have received considerable attention in recent years (Lefevre 1998; Brenner 1999; Kearns & Paddison 2000; Mitchell-Weaver et al. 2000; McGuirk 2003) and have often been accompanied by questions about the capacity and deficits of spatial planning (Mees 2000; Paterson 2000; Sandercock & Friedman 2000) or spatial (McGuirk 2005; Healey 2006) strategy. Spatial planning needs to re-examine and reimagine its relationship to urban infrastructure and the contexts in which technical infrastructure decisions with urban spatial consequences are made. In this context, spatial planning is treated as the strategic determination and spatial allocation of land-uses at the metropolitan scale. Or as Healey et al (1999, p.341) have termed it, "a set of governance practices for developing and implementing strategies, plans, policies, and projects, and for regulating the location, timing and form of development". While not directly intended as a counterpoint to the more successful European experience of spatial renewal, Dodson's

(2009) case studies of Brisbane and Melbourne reveal some of the contemporary tensions between spatial planning and infrastructure project development. In this vein, they offer a valuable international contrast to the European perspective and demonstrate the faltering potential of a spatial planning revival in (post-) neoliberal cities.

### **2.3 Alternative Urban Governance Models**

Several urban governance models permeate the literature but the following represent the most distinctive types and those most relevant for Australian cities.

#### *Integrated Hierarchical Strategic Plans*

This model builds on the planning criteria agreed at COAG and formalises and reinforces the hierarchical aspects of urban governance. This is the 'Russian-doll' approach which works through the Commonwealth setting a strategic planning framework reflecting its broad-brush national and global imperatives. The state adds more detail (but within the confines set by the Commonwealth) reflecting its whole of city scope and responsibilities, and local government even more detail based on local knowledge, again within the frameworks set from above (OECD, 2007).

Adherence to the plan could be encouraged through the use of tied funding and/or formalisation of roles and responsibilities through the constitution. The advantage of this model is that it helps to manage the range of roles expected of cities in a vertically integrated fashion (Newman & Thornley, 2004). There may be disagreements about whether the higher level of Government has overstepped its responsibilities, or the lower has misinterpreted

the plan, however as a hierarchy the views of the higher government would prevail. A danger of this model is therefore that it could over-emphasise national/global imperatives. It also fails to recognise that it is difficult to neatly segment roles and responsibilities in urban governance, with overlapping and shared responsibilities common.

#### *Formalised Independent Mediation*

This model treats each of the governments (and their particular perspectives) as equally legitimate and overlapping parts of a formal governance network and focuses on the primacy of the relationship between each level of government. It involves setting up independent mediating institutions or joint decision making systems (Kubler, 2007) which attempt to minimise disputes and maximise decision making coordination between the levels of governments or individual governments.

The mediating institutions can be joint forums, independent regulator, or courts or other arbitration mechanisms (OECD, 2007). They can also take a role in engaging with community or market networks (Minnery, 2007). These secondary institutions can be a form of meta-governance which draws its authority from the participating institutions and not the people.

Their operation therefore relies on the delegation of control or at least acceptance of their legitimacy by the primary institutions (Stewart, 2003). A risk is that they still operate in the shadow of the loose hierarchy which currently exists (Whitehead, 2002).

As a result, the model requires alignment of fiscal and operational capabilities so that traditional power imbalances are not perpetuated.

### Transcendental Alliances

By focussing too much on the institutions of governance, the *outcomes* sought by good urban governance may become secondary to self interest. Another way therefore to envisage urban governance focuses on what is being governed rather than by whom - that is, it transcends existing territorial boundaries (Kubler, 2007). As such, it can be characterised as moving from government to governance (Whitehead, 2002; DiGaetano, 1999; Pierre, 1999). This model creates alliances which 'cut across' all levels of government to govern a particular aspect of a city. Much like the alliancing model employed on large engineering projects, relevant governments form a partnership which then becomes an entity in its own right where each partner contributes relevant skills and is mutually interdependent. It also provides scope for private sector or community organisation involvement. The organising principle can be a function, a specific area, a specific project (Salet et al. 2003) or even a whole city based partnership. The various alliances do not need to be permanent, lasting only as long as there is need for the arrangement. The existing formal institutions remain a constant governance base with the alliances providing flexibility above that. Such alliances can also operate horizontally between neighbouring local governments or states to address common issues (Bell, 2007).

A disadvantage of the model is that a closed approach to partnerships may result in less accountability by internalising decision making and may become too technocratic, too remote from either citizens or markets and too dominated by pre-existing hierarchical relationships.

Other more formally networked models of urban governance still appear very context-dependent, as both Carley (2000) and Coaffee & Deas (2008) demonstrate powerfully with UK examples calling into question the practical viability of formalizing and promoting more joined-up governance, reiterating the longstanding difficulty policy makers have encountered in achieving more coordinated policy actions.

### Whole of City Government

Another model to consider is whole of city governments, a form of which already operates in Brisbane. Urban governance at a city level is the most economical model that can address whole of city horizontal coordination issues and still have sufficient critical mass to address macro-economic challenges (Cavallier, 1998; Bell, 2007). While state governments are de-facto whole of city governments, they could be seen to be distracted by competing towns, cities and regions. Unitary city governments allow cities to harness the power of a visionary, single focus mayor, which Newman & Thornley (2004) note is a key element of successful city regeneration. Whole of city governments (and their regional counterparts) can be set up to replace the role state and/or local governments (although this raises questions again of focus on the local dimension) or as an additional level of government (increasing fragmentation issues). They can also operate as a form of meta-governance institution which draws its power from below (aggregation of local governments) or above (delegated from state government). Setting boundaries can be problematic: too small and the city can grow beyond or it may not

take into account broader settlements, such as Brisbane/Gold Coast/Sunshine Coast); too large and there may be disputes between city, suburban and peri-urban interests within. City-only governance also does not benefit from the interdependency of cities and their surrounding regional areas.

#### Civil Society Urban Governance

Other key urbanists point to the importance of civil society involvement in urban governance. Gerometta et.al (2005) identify new ways of governance needed to overcome the consequences of economic, social and political restructuring and explore the role of civil society in new urban governance arrangements that will hopefully contribute to counter the trends towards social exclusion. While aware of the ambiguity of civil society's role in rebuilding governance relationships, they argue that, under certain conditions, civil society is found to be a valuable contributor towards more cohesive cities and governance arrangements that promote them. Such conditions involve the existence of a multiscalar democratic governance regime that favours public deliberation and social economy initiatives. Gonzalez & Healey (2005) draw on institutionalist approaches as developed in the fields of policy analysis and planning, to develop a methodological approach for assessing how the governance capacity for socially innovative action might emerge. Bingham (2006) emphasises that the new urban governance requires not only tools (like tax incentives and contracts for privatizing government functions), but also new processes to carry the tools into effect, including deliberation and dialogue for making policy and dispute resolution (like negotiation, mediation, and voluntary monitoring) for implementing and enforcing it. The processes vary with their application in the policy process, from upstream identification of policy preferences to downstream enforcement.

#### Neighbourhood governance

In the UK and many other European countries, application of the subsidiarity principle has seen a growing emphasis on the devolution of increasing responsibility to sub-metropolitan or neighbourhood scales. Successive UK governments have pledged their commitment to giving ordinary citizens more power and responsibility for managing their own affairs. While the practise has not always kept pace with the rhetoric, it has at least spanned different parties of government. Purdue (2001) has described the crucial role played by community leaders as social entrepreneurs as well as representatives of local interests. Structures and processes to support community leadership in the development of new communities and the regeneration of existing communities remain important. Indeed this theme of community leadership capacity has been identified in Australian research on a distinctive issue in local community development: the role of bodies corporate in strata and community titled developments. Randolph and Easthope (2007) have drawn attention to this issue in a case study of Sydney where almost one million people live in strata titled developments and there are clear lessons for the rest of urban Australia where calls to accommodate national growth through urban consolidation are likely to see increasing reliance on strata titled developments. They point to potential problems over the management of long term maintenance, to related problems of deteriorating amenity in the areas surrounding such schemes and of the possibility of social conflict within schemes that lack effective governance structures. The more general point is that robust measures of effective local governance can be

constructed along with relatively simple indicators of performance, such as membership of governance committees, participation in local elections and satisfaction with governance structures.

#### *Climate Change & Urban Governance*

Climate change represents perhaps the most significant challenge of the effectiveness and practicality of urban governance models. Studies of the urban governance of climate change have proliferated over the past decade, as municipalities across the world increasingly place the issue on their agendas and private actors seek to respond to the issue. Bulkeley's (2010) review examines the history and development of urban climate governance, the policies and measures that have been put into place, the multi-level governance context in which these are undertaken, and the factors that have structured the possibilities for addressing the issue. He highlights the limits of existing work and the need for future research to provide more comprehensive analysis of achievements and limitations of urban climate governance. He calls for engagement with alternative theoretical perspectives to understand how climate change is being governed in the city and the implications for urban governance, socioenvironmental justice, and the reconfiguration of political authority. Gleeson's new (2010) book *Lifeboat Cities* similarly issues a clarion call to confront urban natural and economic disruption and crises in different ways.

#### **2.4 Metropolitan Commissions?**

In the face of urban governance deficits outlined above, Gleeson et al (2010) argue the case for a new model of metropolitan governance, specifically recommending that state governments work with the Commonwealth and with local governments to establish metropolitan governance frameworks that respond to and exploit the unique physical, social and environmental qualities of our capital city regions.

They argue that the Commonwealth should consider funding transition to metropolitan governance through the COAG framework, with incentive payments linked to progress benchmarked against a nationally agreed reform model and in so doing, the Commonwealth remain an active metropolitan partner once the Commissions are established.

Gleeson et al (2010) also emphasise a number of imperatives and features which all governance structures must share. The most important universal imperative is the immediate need to improve structural planning in Australia's metropolitan regions and to urgently give meaningful effect to the goal of decentralised concentration. Allied to this is the requirement to vastly improve the planning and functioning of our long neglected public transport systems to ensure realisation of the mutually reinforcing goals of urban accessibility and equity. It should not be neglected that planned dispersion will create more economically efficient cities and provide a significant boost to regional productivity. This underscores the national importance of the metropolitan governance reform task.

Significant acceleration towards the vision of a compact city will require smarter approaches to urban design, particularly at the precinct level, as well as a rethink about the distribution of high density development at the level of urban structure. However, it is unlikely that we will simply design our way to a more sustainable and efficient urban

structure or, just as importantly, to credibility with the metropolitan community. A precondition for meeting these objectives is a thorough reconstruction of planning governance in Australian cities.

What are the governance features that should generally inform the development and operation of metropolitan authorities? Gleeson et al (2010) believe that this question needs to be approached with the subsidiarity principle firmly in mind. They summarise in the Table below their view of how the principle should be applied to the reorganisation of planning governance in Australia.

Their most practical (and somewhat controversial when first released in early 2010) recommended first step to establish in each city region a regional planning authority or Commission with clear responsibility for those places and issues which are of metropolitan significance, including:

- All the principal activity centres in the metropolis;
- All the public transport corridors which have major intensification potential;
- All the economic drivers including key employment nodes, including the CBD;
- The airport zone; and
- All development proposals above a threshold size or value.

Outside these areas and issues, local governments would have greater independent discretion than they have today to pursue localised planning solutions.

They suggest a transition to metropolitan governance which could be staged rather than instituted in one reform package. With reference to the Table below, the suggested staged development approach would comprise:

Stage 1: Metropolitan planning authority with jurisdiction over the matters set out in the third row of Table 1, reporting to a forum or 'board' comprising delegates from councils plus state appointed members.

Stage 2: Metropolitan planning authority plus responsibility for planning and financing major roads, public transport, major open space, major water cycle infrastructure, and urban regeneration functions. This would include the assumption of separate taxing/bond raising powers.

Level	Examples of activities or decisions for this level
National level	<ul style="list-style-type: none"> <li>• Improving national consistency of planning and building regulation</li> <li>• Resolving cross-border issues such as water supply, ports and transport connections</li> <li>• Environment, heritage issues of national</li> </ul>

	significance
State/Territory level	<ul style="list-style-type: none"> <li>• Maintaining state-wide land use and development regulation system</li> <li>• Maintaining administrative and judicial review processes</li> <li>• Overseeing planning institutions</li> <li>• Development planning and development determinations for sites or projects of state-wide significance</li> </ul>
Regional/metropolitan level	<ul style="list-style-type: none"> <li>• Prioritising and investing in strategic infrastructure of metropolitan significance</li> <li>• Designating major activity centres and facilitating development in these centres</li> <li>• Designating and managing major transportation corridors</li> <li>• Identifying and developing key economic strategies including employment nodes</li> <li>• Formulating land release schedules in growth areas</li> <li>• Protecting environmental and cultural assets of regional significance</li> <li>• Maintaining efficient land supply for housing</li> </ul>
Local level	<ul style="list-style-type: none"> <li>• Neighbourhood structure planning</li> <li>• Regulating housing development and redevelopment within applicable State and regional guidelines</li> <li>• Regulating development in all lower order activity centres</li> </ul>

### 3. Measures and tools

#### 3.1 Urban Governance Index

Within the framework of the Global Campaign on Urban Governance, UN-HABITAT is currently developing and testing an index to measure the quality of urban governance. The *structure* of the index reflects four core principles of good urban governance promoted by the Campaign as the overall organising framework for the Index: effectiveness, equity, participation and accountability. The index can then be used to test for correlation between the quality of urban governance and issues such as urban poverty reduction, quality of life, city competitiveness and inclusiveness.

The following list gives an overview of the 25 indicators, which have been tested in 24 cities. The Index is composed of four sub-indices, namely: Participation sub-index; Equity sub-index; Effectiveness sub-index; and Accountability Sub-Index.

##### Effectiveness

Local government revenue per capita  
Ratio of actual recurrent and capital budget  
Local government revenue transfers  
Ratio of mandated to actual tax collection  
Predictability of transfers in local government budget  
Published performance delivery standards  
Consumer Satisfaction Survey  
Existence of a vision statement

##### Equity

Citizens' Charter: right of access to basic services  
Women councillors as a percentage of the total number of councillors in a local authority (in the last election).  
Percentage of women councillors in key positions  
Pro-poor pricing policies for water  
Incentives for informal businesses

##### Participation

Elected council  
Selection of Mayor  
Voter turnout  
Public forum  
Civic Associations per 10,000 population

##### Accountability

Formal publication (contracts and tenders; budgets and accounts)

Control by higher levels of government

Codes of Conduct

Facility for citizen complaints

Anti-corruption Commission

Disclosure of Income/Assets

Independent audit

### 3.2 Ready-now Urban Governance Indicators

KPMG's (2010) independent audit of city planning systems recommended several key measures of urban governance, based on the logic that "metropolitan planning and infrastructure strategies should serve as broader policy objectives of governments. To this end, these objectives should be articulated as quantified and measurable policies of State and Territory Governments".

Their selection of key indicators was based on the availability of high quality, reliable and complete data. Evidence for the four indicators was drawn from nationally consistent data which is collected at least annually. As a result of the lack of available data, a number of important external indicators had to be omitted from their review, including consistent city-based data for issues such as housing supply, housing affordability, productivity, gross city product and greenhouse gas emissions. Therefore the following were proposed as *indicative* key external indicators:

- budget alignment - the actual capital city infrastructure projects funded in 2009-10 State and Territory budgets<sup>2</sup> have been compared with the infrastructure needs identified in the relevant metropolitan and infrastructure plans for each capital city. This serves to highlight if proposed plans are leading to investments;
- population management - the target population levels for each capital city over the next 25 years (as reported in their metropolitan plans) have been compared against the high scenario population growth forecasts prepared by the Australian Bureau of Statistics (ABS) and the actual population increases experienced by each capital city in 2008-09. While population levels do fluctuate over the long term, this is meant to highlight the extent of population growth that can occur over a short period potentially leading to the need for more regular performance reporting and updating of projections;
- housing affordability for key workers - the comparative affordability of housing for 'key worker' groups were compared across each capital city for 2009, sourced from the BankWest Key Worker Housing Affordability Report 2009; and
- congestion - the projected estimates of the costs of congestion as reported by the Bureau of Transport and Regional Economics (BTRE) for each capital city can be analysed and compared. The aggregate figures reported by the BTRE have been adjusted in order to calculate per capita estimates for each capital city.

## 4. Summary

While federal involvement in Australian urban governance is largely welcomed by planning theorists and practitioners, there is consensus that it is hardly sensible to simply add a layer of federal-urban intervention without some finer tuning of multi-level governance of the cities. The admittedly limited history of national urban policy in Australia points to the vulnerability of interventions that are linked to a deeper ambition to transform federalism. And yet, the need for new regionally-based approaches to urban management seems evident given the complexity and scale of Australia's principal urban conurbations. The larger metropolitan areas, especially Sydney, Melbourne and Brisbane, are now set within extensive, multi-nucleated urban regions, that include formerly independent regional towns and even cities. Brisbane is part of a larger South East Queensland conurbation that includes Ipswich and the Sunshine and Gold Coasts. Sydney is increasingly seen as part of a larger, connected urban landscape that includes the Hunter and Illawarra regions. Effective management of these extensive urban regions invites some new thinking about regional governance. An expanding international literature has pointed to the heightened significance of metropolitan regions in the globalised economy and to the need for governance structures that can maintain their productivity and sustainability.

An opportunity exists to respond to these global imperatives, and to the increasingly manifest sustainability pressures on Australia's cities, through the creation of new structures to manage urban regions. These new regional structures could focus on urban management, without becoming urban governments. They would have some governance qualities, if supervised by elected state and local government representatives, but no direct political authority or responsibilities. The governance of new regional urban management bodies would be strengthened by representation from the Commonwealth, which would also contribute funding. A precedent for this model existed in the cooperative processes that coordinated planning in South East Queensland (SEQ) during the 1990s. Until superseded by a new state based framework in 2005, the *SEQ Regional Framework for Growth Management* was a governance partnership involving the Queensland State Government, the South East Queensland Regional Organisation of Councils and the Commonwealth. Whilst it lacked the directive powers needed for sound urban management, and which now exist in the framework that replaced it, the *SEQ Regional Framework* pointed to the possibilities for cooperative urban regional governance, involving all three tiers of Australian Government.

A range of urban commentators and urban advocacy groups believe that responsibility for everyday urban management should be shifted from state governments to new metropolitan planning authorities, preferably with direct representation from local government. The Planning Institute of Australia has proposed new metropolitan planning commissions with a clear and well-resourced brief to manage the cities sustainability and in the collective interest. This would contrast very favourably with the present situation, too often marked by weak or under-resourced state planning departments that leave urban management largely to state road agencies and ill-equipped local governments.

As Parkin (1982:82) observed some time ago:

... the development of coherent urban policy is not necessarily dependent on largesse of funds. It requires, more importantly, a consciousness of the urban dimension, of the interdependent forces at work within cities, of the distributive impacts of public policy in housing, transportation, public health, welfare, education, urban planning, employment and so on. It is as much a question of policy orientation, policy priorities and policy organisation as of budgetary capability.

These insightful comments underline how much could be done to improve the governance of Australia's urban regions, if state governments simply gave higher priority to urban policy and approached its objects with imagination and energy. In the decades that have passed since Parkin's observations were recorded, there has been little evidence that state governments are willing to apply his advice consistently. This suggests that the independent metropolitan commission model has substantial practical merit. Further, the cumulative effects of prolonged under-investment in urban infrastructure and services, together with the new challenges arising from globalisation and ecological threat, mean that substantial national investment in the cities is both necessary and urgently required.

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