Megaprojects: A Global Review and the Australian Context

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Abstract
Large scale mixed-use urban renewal projects have been increasingly occurring in Australian cities over the past three decades. These megaprojects represent a type of urban development occurring widely around the world in varying city contexts that share an economic and political rationale. With a number of these projects built or at various stages of their necessarily long construction periods it is now possible to evaluate the results, or progress, and begin to better understand what the built outcomes and delivery processes are like. An evaluation of megaprojects is particularly timely in the context of Sydney, considering the recent announcement by the New South Wales Government to develop “The Bays Precinct”; 80 hectares of government owned, predominantly post-industrial waterfront land within 2km of Sydney’s city centre.

This paper presents a literature review on the global emergence of mixed-use megaprojects with reference to the Australian condition. It then attempts to distil the key criticisms of these projects at a global perspective, followed by examples of Australian megaprojects where these qualities are evident. The literature reveals that megaprojects around the world are widely criticised on democratic, economic and social grounds yet they appear only to be gaining momentum as a method of delivering commercial, housing and transport infrastructure. The findings suggest that in light of emerging evidence a reevaluation of the objectives, planning processes, and delivery methods of megaprojects is warranted.

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“The festival provides a platform for a range of views, academic reflection and critique, international expertise and experience and community discussion on urban renewal (megaprojects) to challenge practice and define approaches that maximise the public interest and benefit.”

http://www.festivalofurbanism.com/
Megaprojects: A Global Review

Precinct scale urban renewal projects have been occurring at an increasingly rapid rate around the world over the past few decades. Large projects are not new however the recent host of projects share common underlying processes of political and economic restructuring that has been occurring globally since the late 1970s (del Cerro, 2013; Moulaert, Rodriguez, & Swyngedouw, 2003; Oakley & Rofe, 2005; Olds, 2001; Orueta & Fainstein, 2008). Increasingly these projects are taking the form of mixed-use developments of housing, office, retail and entertainment facilities and are often associated with new transport infrastructure. Collectively these projects have been referred to as large scale urban development projects (del Cerro, 2013; Moulaert et al., 2003; Oakley & Rofe, 2005; Olds, 2001; Orueta & Fainstein, 2008), global urban projects (Marshall, 2003) or more simply megaprojects (del Cerro, 2013; Fainstein, 2008; Flyvbjerg, 2005).

This paper reviews the literature on megaprojects of a mixed-use nature that demonstrate how increasing global competitiveness (Florida, 2002; Moretti, 2013; Porter, 1998), massive shifts in global investment from physical to human capital (Sassen, 2001), increasing focus on knowledge industries (Montgomery, 2007; Moretti, 2013) and a near world-wide embrace of market-rule ideology and politics (Brenner & Theodore, 2005) are being translated into urban form and infrastructure. It is argued that these projects represent an emerging, if not already embedded, method of city making occurring widely around the world in vastly different contexts (figure 1.).

Australian examples of megaprojects include Barangaroo, Darling Harbour, Melbourne Docklands, Port Adelaide and the most recently announced Bays Precinct in Sydney.

A review of 17 descriptions of megaprojects demonstrates consistent characteristics in their underpinning rationale, delivery methods and outcomes. In addition to their scale and mixed-use nature they share the premise of elevating the competitive position of their metropolitan economies into regional and global economic networks (Beauregard, 2005; Bunnell, 2013; Marshall, 2003; Swyngedouw, Moulaert, & Rodriguez, 2002).

Under these conditions megaprojects invariably consist of;

- High-end residential and A-grade office space in order to attract (often foreign) investment and subsequent high-profit companies and affluent residents.
- Leisure and consumption amenities in order to attract affluent residents and visitors.
- Large and striking buildings to symbolise new economic growth and provide high marketing visibility regionally and globally.

The global proliferation of these projects has aroused interest as an area of research with a growing body of literature emerging. This literature is remarkably consistent in its criticism of the delivery and governance methods for being exclusionary, lacking accountability and focusing on profitability at the sake of local issues. The literature is as equally consistent in its criticism of the built outcomes for being generic, disconnected from their context and providing minimal public benefit (del Cerro, 2013;
Fainstein, 2008; Majoor, 2009; Marshall, 2003; Oakley & Rofe, 2005; Swyngedouw et al., 2002).

In light of this critique and the persistence of this method of delivering housing, commercial and transport infrastructure there is a pressing need to better understand these projects. What are the underlying motivations? How are they governed? What are the built outcomes like? What are the local and city-wide implications? This consistent global criticism is the focus of this paper and begins to enable an understanding of two issues. Firstly that megaprojects are a global phenomena occurring in different city contexts around the world and secondly that despite the varying contexts the problems and challenges of megaprojects are globally consistent. A forthcoming paper focuses on alternate approaches whereby megaprojects have been leveraged to provide significant public benefit and produce neighbourhoods that are diverse as well as competitive.

Figure 1. Examples of megaprojects in varying contexts sharing a formal structure of bulky buildings in large nondescript open space. Clockwise from top left: Zuidas, Amsterdam; Melbourne Docklands; Canary Wharf, London; Ørestad, Copenhagen.

Emergence of Today’s Megaprojects

Political and Economic Restructuring; Neoliberalism at a Glance

Megaprojects are a result of a shift in the global political and economic climate beginning in the early 1980s. This period saw fundamental changes in the nature of the world economy in terms of financial capital becoming more fluid in a world of increasing complexity, interconnectedness, mobility and competitiveness (Dicken, 1992; Sassen, 2001; Stimson, 1995). This has been most extensively documented in the context
of US and the UK (Sassen, 2001) but these patterns have been no less impactful in Australia (Stimson, 1995). Neoliberal polices were developed at this time as both an enabler and in response to economic globalisation processes (del Cerro, 2013). It is these underlying processes of which megaprojects are a prominent spatial outcome (Moulaert et al., 2003; Olds, 2001; Taşan-Kok, 2010a). They have since featured prominently on the policy agendas of ambitious metropolitan regions around the globe (Altshuler & Luberoff, 2003).

Megaprojects are conceptualised with a central purpose of elevating the competitive position of cities into international economic networks. It is believed that these projects will provide the city with international visibility and attract investment in their construction and occupation (Bunnell, 2013; Marshall, 2003; Swyngedouw et al., 2002; Taşan-Kok, 2010a). To this end megaprojects are invariably composed of large-footprint “A-grade” office buildings, retail centres and high-end residences and hotels, as these are the only three forms of construction that can yield big profits (Fainstein, 2008). In order to boost the international visibility and marketability while signifying new economic growth megaprojects customarily include contextually large, striking buildings that are rhetorically loaded with symbolic significance and virtually always described as ‘iconic’ (Novy & Peters, 2013; Oakley, 2014; Orueta & Fainstein, 2008; Ponzini, 2013).

The project of neoliberal globalisation is simultaneously a response and a stimulus to increasingly internationalised markets and practices (Peck, 2001). In a similar way megaprojects are both a result of political and economic change as well as catalysts of urban and political change, fuelling processes that are felt not only locally, but regionally, nationally, and internationally (Swyngedouw et al., 2002).

**Mobility of Capital and the City**

Globalisation is an incredibly loaded term. So loaded it can appear at times to act as a prevailing term for contemporary existence. In common discourse globalisation seems to be a processional fact of life; used as a “metaphor for practically everything that has been happening everywhere through the late 20th century” (Soja, 2000: 190).

A quarter of a century ago Giddens (1990: 64) asserted that “whoever studies cities today, in any part of the world, is aware that what happens in a local neighbourhood is likely to be influenced by many factors – such as world money and commodity markets – operating at indefinite distance away from that neighbourhood itself.” This statement can now be taken as a matter of course and is merely the first sentence in volumes of literature that attempts to grapple with the depth and breadth of the effects of globalisation on urban space.

A foundational process of globalisation is the mobility of capital, which has resulted in a series of far-reaching economic pressures on urban space. The central historical element of this is the shift from manufacturing to service sectors occurring over the second half of the 20th century that has dramatically altered the global geographic-economic landscape. Castells (1989), Dicken (2007) and Sassen (2001) document this shift extensively which can only briefly be touched on here. The key point is
the mobility of finance and human capital. An indicator through which to grasp the enormity of changes in mobility of capital is through foreign direct investment (FDI).

FDI increased significantly during the 1960s and 1970s but the 1980s and 1990s saw massive international financial investment towards services (Sassen, 2001). Figure 2. shows how global FDI in services has been steadily growing, while it has been falling in raw materials and primary products. For cities today this means that success, or wealth, determined by productivity and high salaries is derived less from factors such as natural resource endowments and mass production but more from deep pools of knowledge markets in areas such as finance, information technology and life science (Moretti, 2013b). This condition of capital mobility is foundational to megaprojects.

![Figure 2. Percentage of global Foreign Direct Investment (FDI) in services. Source: Based on information provided in Sassen (2001: 37).](image)

It is not only capital but people that have become more mobile. “What the international firms say... is that first they could recruit their workforce nationally, but now the market is such that they have to go out and recruit internationally... It's therefore important for them to locate where they can attract international labour.” (Poul Madsen, Director, Commercial Development Planning, Roskilde County Copenhagen, 21 January 2000 quoted in Hansen, Andersen, Clark, & Lund 2001). Sassen (2001) demonstrates just how internationally mobile the professional labor market can be by providing a list of top law firms in New York, Chicago and London that shows the percentage of foreign employed lawyers in each. At 2000 levels topping the list is Chicago based Baker & McKenzie with almost 80% of its lawyers being citizens of other countries. Half of the firms on the list have a foreign employed workforce of over 30%.

Financial and human capital are more mobile today than ever before. This has been resulting in urban transformations in which city builders have been struggling to position their cities within an emerging new socio-political division of labour, production and consumption and align their local networks with the perceived or real requirements of an increasingly deregulated and neoliberal international economic system (Moulaert et al., 2003).

**Growth and Re-urbanisation as Prosperity**

In recent decades cities have increasingly been understood as growth engines of regional and national economies. Growing cities is often equated as necessary to growing economies. Batty (2011) claims there is fairly conclusive evidence that more
populous cities are more prosperous. He argues that incomes per capita, the number of innovations, cultural and educational institutions and creative pursuits scale more than proportionately with city size, by the simple fact that face-to-face contacts increase more than proportionately. It is the large cities, according to Batty, that are the success stories of the global economy and wealth generation. Similarly the efficient provision and use of infrastructure and services under more populous cities have been argued for some time, most often in the compact city discourse (Dantzig & Saaty, 1973; Freestone, 2010; Newman & Kenworthy, 1999).

Of course it is not as simplistic as “more is better.” A list of the most prosperous cities according to the UN Habitats City Prosperity Index shows an extremely varied relationship between population size and prosperity (see figure 3). According to this index (it is important to acknowledge there are many) the most prosperous city in the world, Vienna, has only 1.7 million inhabitants while the second most prosperous, New York, has almost 20 million. Five of the top 10 most prosperous cities have less than 2 million inhabitants yet Tokyo, at number 10, has almost 37 million inhabitants.

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<th>Ranking</th>
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<td>10.</td>
<td>Tokyo, Japan</td>
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Figure 3. Top 10 most prosperous cities according to the UN Habitats City Prosperity Index 2012/2013 (United Nations Human Settlements Programme [UN Habitat], 2012).

The point is there are many variables; productivity, quality of life, infrastructure development, environmental sustainability, equity and social inclusion to name a few. Therefore efficiencies of more populous cities are reliant on a degree of accessibility; to adequate housing, jobs, social services, recreational and leisure amenities and so on. This requires certain land-use and transport patterns that are coordinated in order to achieve benefits of scale. So both premises can be, in principle, correct however as will be discussed the relationship between city growth and prosperity under urban policies guided by neoliberalism (megaprojects being an exemplar) has been shown to favour certain groups while disadvantaging others and accrue benefits that are geographically highly uneven.
The dogmatic assumption that city growth equals prosperity has paralleled the trend towards re-urbanising after decades of sub-urbanising. Loukaitou-Sideris & Banerjee (2011) argue that after three decades of city flight globalisation created the investment conditions necessary for the return to the city of density, transit and mixed-use towards the end of the 20th century. Oakley & Rofe (2005) observe that the governance transition from managerialism to entrepreneurialism, typified by neoliberalism, has run parallel with governments push to repopulate inner city areas and the increasingly used benchmark of consumption in rating prosperity. Swyngedouw & Moulaert (2002) describe this new competitive urban policy as “re-centering” whereby developing the city is primarily geared towards investors, developers, business people and wealthy tourists, grouped collectively as “outsiders.” How precisely true this dichotomist reading of the city is remains open to discussion but certainly for megaprojects the literature is strikingly united in that today’s large urban projects are consumption oriented in a quest to attract mobile capital (del Cerro, 2013; Oakley & Rofe, 2005). The result is an inherent tension between the desire to accumulate capital and social and environmental justice (Fainstein, 2010). Neoliberal policies in the urban condition have been revealed to constrain democratic participation by removing opportunities for opposition to mobilise (Brenner & Theodore, 2005). Nevertheless the provision of urban infrastructures and amenities required by service sectors are seen by public agencies as a crucial factor to enhance the competitiveness of cities (Beauregard, 2005). This investment is being funnelled into developments that increase consumption economies with supporting high-end residential, office and retail space – those with the greater anticipated financial return.

From Planning to Projects
The political strategy of neoliberalism has been linked to the cultivation of a planning agenda that exhibits spatially selective characteristics, favouring capital accumulation over public benefit. According to Swyngedouw & Moulaert (2002: 562) large-scale urban projects, presented as project-focussed and market-led initiatives, have replaced statutory planning as the primary means of city development; 

Essentially fragmented, this form of intervention goes hand in hand with an eclectic planning style where attention to design, detail, morphology, and aesthetics is paramount. The emblematic Project captures a segment of the city and turns it into the symbol of the new restructured/revitalized metropolis cast with a powerful image of innovation, creativity, and success.

Brenner and Theodore’s (2005) review of case studies on contemporary urban restructuring demonstrates how neoliberal policies have extremely variegated geographical implications. Particular places or systems are targeted in search of some form of capital accumulation and thus each intervention has its own specific set of policy processes. In the Australian context Oakley (2014) explains that the effect of neoliberal governance skews development provision towards large-scale high-end residential projects where housing is primarily viewed as a commodity for
its speculative and accumulative potential and that the state is increasingly relying on private sector and market led approaches to deliver them. These conditions present significant challenges to addressing equitable distribution of adequate housing, transport infrastructure and other services across the city as a whole.

A report on productive cities by the Grattan Institute reveals a socio-spatial economic divergence within large Australian cities (Kelly & Mares, 2012). The report found that there is an increasing polarisation within Australian cities by income, health, education level and access to jobs. City centres are increasingly concentrated with higher paid knowledge based professionals while workers with trade skills or low skills are concentrating away from the centre. A recent study demonstrates that 20 years of neoliberal policies have resulted in an increase in geographic concentration of disadvantage in Australian cities, particularly a marked locational shift of disadvantage to suburban areas (Randolph & Tice, 2014). The authors conclude by acknowledging:

it is hardly surprising that a greater reliance on the market to allocate housing opportunities will have led to greater spatial polarization, because housing markets have responded to these initiatives in the only way the market knows—to “sift and sort” social classes into their respective spatial locations reflecting ability to pay (Randolph & Tice, 2014: 397).

These issues highlight incompatibilities between neoliberal strategies and overarching spatial planning and social justice. Campbell et al. (2013) argues that the competitive discourse of neoliberalism with its rhetoric of “delivery,” in which visible signs of change are highly symbolic, encourages development with minimal scrutiny on overall benefits. Under these conditions Marshall (2003) claims that large scale urban projects represent a new way of planning the city that is centrally concerned with marketing and the provision of competitive infrastructure. The literature suggest that much of today’s city making is undertaken by delivering a list of big, often disconnected projects with the primary aim of attracting investment, the benefits of which according to Swyngedouw & Moulaert (2002) are almost always reaped by the private sector.

Appraising Megaprojects

There is an emerging body of literature examining the genesis, governance, delivery and built outcomes of megaprojects around the world. This section looks at how these projects have been appraised as a particular type of urban development and considers this appraisal in light of recent Australian megaprojects.

A review of the literature covering 30 megaprojects in 16 countries (Bruzelius, Flyvbjerg, & Rothengatter, 2002; Bunnell, 2013; del Cerro, 2013; Fainstein, 2008; Grubbauer, 2013; Jones & Moreno-Carranco, 2007; Lobo, 2013; Majoor, 2009; Marshall, 2003; Oakley & Rofe, 2005; Orueta & Fainstein, 2008; Ponzini, 2013; Swyngedouw et al., 2002; Taşan-Kok, 2010a) shows that while satisfying the appetite of capital accumulation the operational characteristics of these projects are consistently criticised as:
• Uncritical local manifestations of a global phenomenon;
• Minimal commitment to socially just policies with the primary orientation towards profitability and competitiveness;
• Delivered by quasigovernmental organisations;
• Operating within introverted business-oriented modes of governance that lack democratic accountability and exclude public participation.

With similarly consistent criticism of the built outcomes as:
• Bearing striking formal similarity irrespective of the host city;
• Containing a dominance of purely economic spatial functions, especially large office programs, luxury residential buildings and clinical ‘iconic’ architecture;
• Lacking the layering of old and new, small and big;
• Often self-contained, isolated, and disconnected from the surrounding city;
• Containing, lifeless, predictable and controllable public spaces;
• Indifferent to specificities and uniqueness of context.

This criticism can be grouped into five categories, termed here as consistent criticisms.

**The consistent criticisms of megaprojects**
The following five consistent criticisms attempt to distil the literature on the failings of megaprojects. They are presented under thematic headings with a global perspective. Each consistent criticism is followed by local examples where these qualities are evident. In this way we can begin to determine if Australian megaprojects conform to the global criticisms and by what degree.

**Delivery, objectives and process:**
1. Introverted governance lacking democratic participation and accountability.
2. Global economic positioning at the sake of local issues.

**Physical and social outcomes:**
3. Physically and socially disconnected from the context of host city.
4. Similar formal outcome regardless of the host city.
5. Lack of public benefit and social outcomes.

1. **Introverted governance lacking democratic participation and accountability**
   We got a new set of planning laws in the 1970s and 1980s that meant increased public access to and engagement in planning. It was troublesome and time-demanding. Therefore, these corporations were constructed, which need not be subjected to the same rules of public transparency, for some of the big projects.
   (Kaj Lemberg, retired Head of Planning, Copenhagen, 25 January 2000; quote from Hansen et al., 2001: 586)
According to the literature megaprojects tend to operate under introverted, business-oriented modes of governance that circumvent traditional democratic channels of participation and accountability (Fainstein, 2008; Oakley & Rofe, 2005; Swyngedouw et al., 2002). Bruzelius et al. (2002) argues that megaprojects often lack mechanisms to enforce accountability in terms of measuring how objectives are being met and systems whereby good performance is rewarded and poor performance penalised. Majoor (2008) argues that these introverted, project-oriented forms of governance maintain strict formal and informal rules that control access to decision-making, outside of those groups standing to gain most. Del Cerro (2013) claims that in this sense megaprojects represent physical manifestations of the global ambitions of urban elites.

The literature generally paints a picture of very grey, non-formalised and non-transparent planning processes of megaprojects. The critiques of non-transparency, exclusion of ‘non-experts’ and protected interests is alarming from a democratic point of view but also from an economic point of view. Bent Flyvbjerg’s extensive study on megaprojects and risk, covering hundreds of projects in over 20 countries, presents a scathing economic critique arguing that it is not the most feasible projects that get built but rather “those projects for which proponents best succeed in conjuring a fantasy world of underestimated costs, overestimated revenues, undervalued environmental impacts and overvalued regional development effects” (Flyvbjerg, 2005: 18).

Local evidence of this criticism
In the case of Barangaroo transparency, participation and accountability have all been heavily criticised from academia, government, professional and popular media quarters. From the moment the winning design and planning framework was replaced by a proposal led by the multinational developer Lend Lease a steady stream of changes have occurred that increase development profitability while reducing public benefit – plans now show more than double the amount of floor space of the original 2005 brief. According to the City of Sydney (2014) these changes have occurred with no apparent independent scrutiny or wider participation in traditional democratic processes. The fact that such a significant project should be subject to less, rather than more scrutiny, has been labelled ‘perverse’ (Stickells, 2010).

With the listing of the project under Part 3A (after the issuing of the brief and completion of a two stage international competition) community involvement in the decision-making process was reduced and possibilities for review limited. The alternate process gave the Minister for Planning executive power to make all key decisions. This has been reported as blocking opportunity for effective professional criticism and undermining the public interest (Farrelly, 2014; Stickells, 2010).

Technical vagueness has been exhibited in the transport planning for Barangaroo. 23,000 people are expected to live and work at Barangaroo and another 33,000 are expected to visit daily. In 2011, four years after the approval of the Barangaroo Concept Plan - acting as the statutory master planning instrument - the transport planning was described as little more than vague ideas (Withnell, 2011). This is despite the
publicised goal that 96% of employees during peak will travel by public transport, bicycle or foot (Barangaroo Delivery Authority, 2013). The number of employees anticipated to travel during peak is not provided but in a worst case scenario (they all do) 96% is 22,000 people. To consider this by transport mode capacity that would mean 368 busses, 73 trams or 18.5 double decker heavy rail trains. The question that this raises is how was such major development (“Sydney’s largest redevelopment project this century”, by BDA’s own admission) approved and progressed without a well defined transport strategy, including commitment for investment in new or upgraded public transport infrastructure. In September 2012 the Barangaroo Integrated Transport Plan was released. The plan primarily proposes “viability investigations” and “feasibility studies” for increasing capacity on existing infrastructure.

By global megaproject standards transport infrastructure provision at Barangaroo could be considered very poor. The Ørestad and Nordhavn megaprojects in Copenhagen, Hudson Yards in New York, HafenCity in Hamburg, Zuidas in Amsterdam and Kop van Zuid in Rotterdam included commitments for new rail lines and stations as part of the early planning phase. In the case of Ørestad the metro line was constructed first, funded by the future sale of the public land (Book, Eskilsson, & Khan, 2010). This strategy of funding a new metro line with the revenue raised from selling public land is now being implemented at Copenhagen’s next megaproject Nordhavn.

![Figure 4. Ørestad's operational elevated metro during construction of residential buildings. The metro was planned as the 'backbone' of transport for Ørestad (By & Havn, 2010).](image)

A number of high profile conflicts have highlighted the governance issues discussed in the literature. In 2010 Mayor of Sydney Clover Moore resigned from the Barangaroo Development Authority claiming the public were being “railroaded” with persistent breaches of transparency and poor public consultation (Farrelly, 2010; Moore, 2010). In 2013 Jan Gehl, the acclaimed Danish urbanist commissioned to advise on the public domain resigned from the project, citing an absence of communication and concerns the quality of the public domain was declining. Gehl claims that despite repeated attempts to participate in the design process for almost two years “we have not been informed about any progress”. Consequently a request was submitted by Gehl Architects that their name and logo be removed from the project (Hasham, 2013).
More recently City of Sydney Councillors have raised concerns that the state
government has a conflict of interest as it is both the landowner and assessment
authority for Barangaroo. “This brings with it significant risks, perceptions of bias and
lack of independent scrutiny of the development assessment” (City of Sydney, 2014).

In the case of Melbourne Docklands, the introduction of urban policies by the incoming
state government in the early 1990s that encouraged private-sector development and
reduced public input did just that. Private sector control of the development increased
and all transactions became ‘commercial-in-confidence’ (Shaw, 2013). In tandem public
consultation and participation effectively ceased (Oakley & Johnson, 2011).

In addition to Barangaroo and Melbourne Docklands, Darling Harbour in Sydney,
Honeysuckle in Newcastle, Beacon Cove in Melbourne and Port Adelaide have
received both academic and popular criticism for the creation of separate authorities
that reduce participation and transparency (Oakley & Johnson, 2011).

2. Global economic positioning at the sake of local issues

“Zuidas is Amsterdam’s prime location, an urban hub with international
allure.”
(Amsterdam Development Office, 2014)

“(The development of Ørestad in Copenhagen)... will provide the Øresund
region with a status as one of the hotspots in the world.”
(Petersen, Chief Economist, Unibank, 2001; quoted in Hansen et al. (2001)

“Barangaroo is the future of Sydney. It is being created as a landmark for
our economic future.”
(Barangaroo Delivery Authority, 2014)

“The Bays will be an iconic destination that beckons the world.”
(The Bays promotional video, Urban Growth, 2014)

It is clear these projects are initiated in response to a climate of intense competition
explains that megaprojects feature prominently in two decades of research on
competitive efforts to “sell” places. Marshal (2003) argues it is through these projects
that governments aspire to enable a stronger relationship with the global economy
and acquire a share of global wealth. Marcuse (1997) argues that governments are
thus highly motivated to create “world standard” projects to achieve these ends.
“Competitive advantage” has become the new mantra of city governance.

Under Bunnell’s view selling these world standard projects leads to designs that are
made to travel; as marketable images to be viewed from far and wide. A primary
objective of megaprojects is to attract national and international investors as well as
mobile high-profit companies and affluent residents and workers (Oakley & Rofe, 2005;
Swyngedouw et al., 2002; Taşan-Kok, 2010a).

If urban development is as heavily influenced by neoliberal tendencies as the literature
suggests and the government rhetoric around creating “world standard” precincts is
taken literally, the question arises of where this leaves local urban issues such as affordable housing and sustainable transport. Goals to address these are laid out at the local, city and state level however the literature suggests megaprojects often conflict with these goals and exacerbate social exclusion and marginalisation via the nature of land use and transport prioritisation restructuring, usually under newly created powers that supersede existing plans through the justification of project “exceptionality” (Grubbauer, 2013; Majoor, 2008; Moulaert et al., 2003).

**Local evidence of this criticism**

The announcements of “world class precincts” at Melbourne Docklands (Government of Victoria, 2002) paralleled public exclusion and the communities concerns over the provision of affordable housing remained unsatisfied (Oakley & Johnson, 2011). Port Adelaide will “be a world-class location for waterfront living, rivalling similar locations both interstate and overseas” (LMC cited in Oakley & Rofe, 2005: 8). The first “Key point” of Perth’s Elizabeth Quay design vision is “To deliver an iconic place and world class destination which signifies Perth globally in the 21st century” (MRA, 2012: 4).

According to the Barangaroo Delivery Authority Barangaroo is “being created as a landmark for our economic future.” It has been described as “redefining Sydney as a hub of Asia Pacific commerce” (Sichelman, 2012). Competing in the global economy is an important endeavour. However there are significant local urban challenges that need to be addressed, which, it is important to acknowledge, are also critical for Sydney’s international competitiveness.

The urban economist Edward Glaeser (2005) argues that economic growth and competitiveness is best served by investing in basic commodities like efficient transport and housing. Lawton, Murphy, and Redmond’s (2013) empirical research shows residential preferences of the mobile workforce every city is striving to attract is weighted towards traditional factors such as housing affordability, distance to work and efficient public transport.

Sydney faces major, and well publicised, housing and transport challenges that could presumably be addressed by large scale urban projects, particularly those on sites predominantly in public ownership. Reinforcing that “Sydney is Australia’s great global city” the clearest message from the promotional video announcing the release of the Bays Precinct is that “The Bays will be an iconic destination that beckons the world” (The Bays promotional video, Urban Growth, 2014). There is no mention of opportunities that may exist to address existing domestic urban challenges. Challenges that also represent no small significance for the city’s interurban competitiveness.

3. Physically and socially disconnected from context

The literature commonly criticises megaprojects as being physically and socially self-contained, isolated and disconnected from their context. Fainstein (2008) and Oakley & Rofe (2005) describe megaprojects as being unrelated to their surroundings; that the specificities and uniqueness of the place is not meaningfully taken into consideration. Often boundaries are formed between the new ‘project’ and the surrounding
communities – between the old city and the new. These may not necessarily take the form of gated communities however reduced access points, transport infrastructure, land use changes – particularly housing, and even the design of the public domain and its relationship to buildings can set up clear socio-spatial demarcations. Changes in demographics and urban character under economic renewal has been thoroughly debated in the discourse of gentrification (Lees, Slater, & Wyly, 2010). Social and physical boundary formation are often a central concern in the critiques of megaprojects (Majoor, 2011; Oakley & Rofe, 2005; Orueta & Fainstein, 2008). Links have been made between megaprojects and intended, or at least accepted, social dislocation (Marshall, 2003; Rofe, 2010).

The prevailing condition that megaprojects visually and socially depart from their surroundings is a logical and intentional outcome of their competitive objectives. A clear difference in spatial and built form is perceived as a necessary for megaprojects to secure their intended status (Ponzini, 2013; Sklair, 2013). These projects need to present as highly visible in order to fulfil their role in conveying an image of regeneration and economic growth (Grubbauer, 2013). This implies a distinctive form as well as clear demarcation of the project in relation to the surrounding urban fabric. The desire for ‘global’ architects to design the buildings and spaces of these projects (enforcing the global image) presents a challenge to the formation of genuinely context-specific places. Parachuting global architects and their buildings are often criticised as being detached from the dynamics, networks and forms of the host city (Koolhaas, 1998; Lang, 2011).

**Local evidence of this criticism**

Social boundary formation can arise when new housing developments are constructed that are financially accessible by only a small minority of the population. These areas effectively become enclaves for a very narrow socioeconomic demographic.

A 2006 cover feature on Melbourne Docklands in The Age in which politicians, planners, academics and architects voiced a raft of criticism highlighted how social stratification had emerged and what that meant for the vitality of the precinct. According to the feature “only cashed-up apartment buyers and renters and major commercial tenants are welcome… The majority of developers, builders, architects, entrepreneurs, small businesses, artists and lower-income residents are excluded, and the architecture, urban design and social mix reflect this (Millar, 2006a cited in Shaw, 2013: 2170). Tony Dalton, housing researcher at RMIT, put it bluntly “You’ve got to have buckets of money to live there, and that’s a tragedy. It should have been a suburb where a whole load of people can live and work” (Millar, 2006a cited in Shaw, 2013: 2170).

According to Oakley and Rofe (2005) the largest concern many local residents have with the proposed plans of Port Adelaide is that they do not reflect the character or history of the site or context and that the development will be in stark contrast to the spatial structure and daily patterns of existing neighbourhoods.
4. Similar formal outcome regardless of host city

In terms of formal characteristics the literature presents an image of a generic urban structure that lacks local idiosyncratic qualities, incidental activities and pedestrian-scaled interaction. Established theories of urbanists such as Jane Jacobs (1961) and Jan Gehl (1971, 2010) argue it is these characteristics, apparently absent in megaprojects, that create the greatest values of cities. However it appears the realisation of megaprojects represents an uncritical local manifestation of a global phenomenon which encapsulates a specific and narrow definition of urban life and culture (Marshall, 2003; Oakley & Rofe, 2005). Marshall (2003) argues the messiness of the city; difficult to control and market, is intentionally replaced by a predictable “absent urbanism” that can be reliably packaged and sold to investors and incoming inhabitants. According to Zukin (1992) the manufacture and presentation of a recognisable, internationalised image is perceived as crucial for global cities to gain competitive advantage.

In Castells (1989) view of the information age the ease of which information can be disseminated has led to a tendency where different societies adopt the same ideas. The effectiveness of policy transfer and ideas adoption across international boundaries has been questioned. Hansen et al. (2001) challenges the premise of the creative cities movement, in which every city is beating the same drum of ‘creativity’ in response to the same pressures of urban competition associated with the forces of globalisation. How much competitive advantage can be gained by re-making the city under the same premise of every other city? The result, according to Fainstein (2008) are urban assemblages that bear striking physical similarity regardless of the host city.

Related to the critique of disconnection from context it has been argued that the architecture of megaprojects reflects a contemporary phase of the International Style, titled circa 1932. While seemingly oscillating between praise, disgust and pragmatic acceptance of the “generic city” Koolhaas (1998) suggests the ignorance of distant architects has led to a “new purism.” Olds (2001: 150) explains this process as a continuation of a decontextualised and universal approach:

In keeping with these modernist approaches to planning and design… architects such as Rogers, Perrault, Piano and Foster will accept work in cities and nations where they have little understanding of the social, cultural, political and economic context. They are firms that offer ‘universal’ solutions to universal problems – a pure modernist design ethos underlying monumental self-referential architecture.

The “Starchitect” is evidently guaranteed a place on the agenda of megaprojects. “World renowned” architects are habitually brought in to “put the city on the map” with “iconic” buildings (del Cerro, 2013; Fainstein, 2008; Marshall, 2003; Taşan-Kok, 2010a). Olds (2001) describes how governments accessorise their cities by actively seeking to acquire a trophy case of buildings from a select group of international architects.
Local evidence of this criticism
In collaboration with Lend Lease the London-based international architecture practice firm Rogers Stirk Harbour are responsible for the master planning of Barangaroo. In answer to a question on Australian cities in a 2011 interview Richard Rogers prefaced his response with “I have to be careful because I don’t know it well.” In the same interview Ivan Harbour admitted a reluctance to get involved in the Barangaroo competition at all because “How do we know what is right for this place?” (Withnell, 2011).

According to Sydney Business Chamber executive director Patricia Forsythe “there is no doubt as well that to put Barangaroo on the map it needs to have an iconic development” (Hayes & Bennett, 2011). Perth’s Elizabeth Quay design guidelines make numerous requirements for “iconic” and “world class” architecture. Ambition is important but what does “world class” and “iconic” really mean?

The flash term “iconic” has become virtually meaningless. A rhetorical dross than does nothing to communicate what is actually going to happen. An icon is a visual representation of an idea. But what and who’s idea? The implicit assumption in this use of the term iconic is to be different, to stand out. And it most likely will, from its context. However the iconography appears remarkably uniform across continents and cultures; large, glassy, irregularly formed to resemble an abstract concept of the architect’s creativity (often derived from ‘nature’ or ‘movement’). They make the ‘project’ resemble other such ‘projects’ around the world in the name of aesthetic competition.

Once built the reality can be far from visually impressive and at times simply dysfunctional. Professor of architecture at RMIT and Melbourne architecture and design authority Leon van Schaik described Melbourne Docklands as “a badly-missed opportunity. It’s all corporate homogeneity, lacking in grit… just the usual, run-of-the-mill, second-rate modernism” (quoted in Millar, cited in Shaw, 2013: 2169-2170).

The rhetoric of Melbourne Docklands in the early 1990s was that the qualities of the site would be crafted to provide Melbourne with a new image in which to compete on a global level. However according to Kevin O’Connor, professor of urban planning, University of Melbourne “the promise was always hollow as the project simply replicated waterfront redevelopment occurring in many places around the world” (O’Connor, 2006). Shaw (2013: 2159) describes Docklands as a “placeless neoliberalism” in that its delivery process and built outcomes “could be anywhere.” It was this sameness that Jan Gehl was concerned about at Barangaroo, that the Sydney waterfront site would become another Melbourne Docklands; a bland, windswept place dominated by skyscrapers.

During the consultation period for Port Adelaide, in which plans and models were shown, a recurrent concern of local residents was that the scheme simply mirrored other waterfront developments sites. “…there’s nothing original or innovative or new and uniquely Port Adelaide in these plans…[rather they look like they have been] lifted from somewhere else” (McClusky cited in Oakley & Rofe, 2005: 8).
A glossy image is one thing, a living, breathing city is another thing entirely. There are many iconic buildings and public spaces around the world that possess allure in a brochure yet are in reality uninviting and unused by the public (figure 4.).

![Figure 5. The Barcelona Forum/Diagonal Mar megaproject presents buildings by world famous architects and award winning public spaces however the design qualities appear insufficient in providing public amenity that local residents, or visitors, appreciate. The above photographs were taken on a weekend, with the adjacent older neighbourhoods bustling with social activity.](image)

5. Lack of public benefit and social outcomes
Megaprojects are widely criticised for their poor contribution to public benefit and social outcomes. The literature is virtually unanimous about the central ethos of profitability of megaprojects which inevitably conflicts with social outcomes (Fainstein, 2008; Majoor, 2009; Sklair, 2013; Swyngedouw et al., 2002). The heavy focus on profitability, according to Fainstein (2008) results in minimal commitment to socially just policies. Megaprojects have been shown to be fundamentally and narrowly geared towards high-income segments of the population or potentially high-productivity based economic activities (Marshall, 2003; Swyngedouw et al., 2002). In doing so megaprojects not only avoid addressing social segmentation and exclusion, they actively accentuate the problem. According to Oakley & Rofe (2005) the growing importance placed on the commodification and consumption of these urban landscapes undermines the potential for communities of diversity and difference to establish and grow.

Local evidence of this criticism
Current approvals for Barangaroo South require 2.3 per cent of residential floor space to be allocated for “key worker housing.” These are people such as nurses, teachers and police that are indeed “key” to the healthy functioning of society yet due to the increasingly high cost of housing cannot afford to live within reasonable distance to their place of work. Lend Lease have reportedly been in negotiations to provide the housing elsewhere, freeing up the floor space to a more profitable market (Hasham, 2014).

It is also worth noting that the affordable housing required at Barangaroo is already very low by international standards. The Hudson Yards megaproject in New York will have 25 per cent affordable housing (figure 5.), Zuidas in Amsterdam and Kop van Zuid
in Rotterdam both require 30 per cent, Stratford City in London; 35 per cent (Fainstein, 2008; HYDC, 2014; Taşan-Kok, 2010b). Next to these comparable projects the 2.3 per cent at Barangaroo is insignificant.

Considering the overall doubling of the floor space from the 2005 brief (see figure 6), and the already very low requirement for affordable housing at Barangaroo, one could be forgiven for interpreting a relentless profit seeking process, be it at the expense of social outcomes and even after massive gains have been made since the project began.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Gross Floor Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 2005 Competition Brief</td>
<td>330,000sqm</td>
</tr>
<tr>
<td>March 2006 Competition Winner</td>
<td>389,511sqm</td>
</tr>
<tr>
<td>February 2007 Concept Plan approval</td>
<td>399,800sqm</td>
</tr>
<tr>
<td>February 2009 Modification 2</td>
<td>519,800sqm</td>
</tr>
<tr>
<td>November 2009 Modification 3</td>
<td>501,000sqm</td>
</tr>
<tr>
<td>December 2010 Modification 4</td>
<td>563,965sqm</td>
</tr>
<tr>
<td>Modification 8 (to be assessed)</td>
<td>598,733sqm</td>
</tr>
<tr>
<td>Modification 9 (to be assessed)</td>
<td>681,008sqm</td>
</tr>
</tbody>
</table>

The City of Sydney has voiced its dissatisfaction that there are no indications “any additional measures are being implemented at Barangaroo to offset the significant impact that a 70 per cent increase in GFA (gross floor area) in this location will have on transport infrastructure and services” (City of Sydney, 2014). The City further highlighted that under the NSW planning system, if council was developing the site, any increases in floor space would require increases in in contributions for public benefit which might include community facilities or affordable housing.
Similar conflicts have arisen between profitability and the provision of the public domain. In 2014 the state-run Barangaroo Development Authority lost its developer contributions dispute with Lend Lease in the NSW Court of Appeal. Whilst the exact financial impacts of this case remain uncertain, there is some concern that the funding for the public domain at Barangaroo will be at risk (Hasham & Bibby, 2014).

When Jan Gehl withdrew his support for Barangaroo he described a process dominated by profit seeking, creating a “strong urge to build as much as possible” while “concerns for the people landscape have gradually evaporated” (quoted in Hasham, 2013).

It appears the massive investments made in waterfront developments in many Australia cities are simply not delivering quality urban environments for the public (Oakley & Johnson, 2011).

**Conclusion**

These consistent criticisms of megaprojects raise serious concerns. If Australia’s recent host of megaprojects are found to conform with the consistent global criticisms; that they actively circumvent democratic processes and the development performance lacks accountability; that they accentuate social-geographic-economic disadvantage; that they poorly integrate or relate to the surrounding city fabric and; that they provide minimal public benefit while accruing massive benefits to a small number of participants then the very justification of these projects comes into question. At the least it would call for a thorough re-evaluation of their objectives, the design and planning processes and delivery methods.

Confirmation that recent Australian megaprojects do in fact conform with these global criticisms requires further research. It is important to acknowledge that some have called for a more contextually grounded view of practice to better evaluate megaprojects (van Marrewijk, Clegg, Pitsis, & Veenswijk, 2008). A forthcoming paper will review the literature on alternate approaches to delivering megaprojects that seek to provide significant public benefit and develop a more diverse, inclusive and authentic new city precinct. Together these papers will present a “good and bad” of megaprojects around the world with the intention of deepening the debate and understanding of how we want our city to develop.

**Bibliography**


Hayes, A., & Bennett, I. (2011, August 8). O’Farrell seeks Barangaroo goodwill. AAP.


