VIBRANT LANEWAYS

Brisbane City Council’s Vibrant Laneways program transforms Brisbane’s laneways into imaginative, fun and engaging spaces. Explore the latest art exhibitions in Burnett, Rowes, Hutton, Eagle and Fish lanes or the King George Square Car Park and see how once forgotten spaces have been rejuvenated.

For more information, visit www.brisbane.qld.gov.au and search ‘urban design’ or call Council on (07) 3403 8888.

Dedicated to a better Brisbane
Reassembling The City: Reinventing the Technologies of Demolition

While European concepts link building to site as a single financial entity, Tokyo is a disposable city where only the land is permanent and buildings are consumables. Japanese traditional construction systems are based on complex wood joints which provide strength and rigidity.

The consequence of this system is that while buildings are assembled, they may also be disassembled, facilitating the process of demolition, portability, resale and re-use. A dismantled building could be removed with ease to another site with its structure, fabric, fixings and fittings. The corollary of this cultural attitude was that only the land was important, to be held intact and handed down from generation to generation. The buildings were expendable.

Change has always been endemic in CBD areas. Economic pressure for the demolition of towers which were once symbols of corporate grandeur has emerged as a determinant in the development process. Exponential change in office environment has accelerated the processes of obsolescence. Business practice, data management and the social organisation of office space have altered the size and form of floor plates. The rising price of site and floor space demands greater returns which in turn place pressure on the regulatory structures of central area planning processes.

While traditional Japanese construction systems operated to facilitate flexibility and portability in the face of natural uncertainty, contemporary building systems for both construction and demolition are now reaching a similar level of sophistication. A high rise tower can be removed floor by floor, quietly and imperceptibly.

The transience of the towers as commercial property is predicated by land value, the economics and technologies of removal. Traditional carpentry methods are now revived in steel and concrete and familiar city centres will renew and transform to match constantly evolving need.
Use and Spatial Patterns of newly developed Public Squares in Urban Villages in Shenzhen

This paper investigates the use and spatial patterns of newly developed public squares in urban villages in the City of Shenzhen, China. Given the lack of information about how this type of public space has been used by the Chinese, this paper provides insights that enable the development of more user friendly public space in China. The research is based on the fieldwork carried out in 2014 to examine public squares in four urban villages in Shenzhen. Direct observation and activity mapping have been used as major methodology for this research. The focus of this paper will be placed not only the formal aspects such as the design aspiration, scale and provision of public amenity, but also on the usage that includes types of users, there daily activity as well as their location preference.

The findings of this research address the failure of current design to meet the needs of the majority of users. Chinese public space users seem to have vastly different behaviour patterns compared with their Western counterparts, therefore many design guidelines emerged in the West can be misleading in China. As important, this paper identifies key issues related the design of public squares in urban villages and provides some hints to mitigate such issues. The paper concludes with design guidelines that reflect not only the cultural complexity of public spaces in China, but also how different scales can be mediated to generate a space that allows for a various activities to occur naturally.
Ms Mandy Banks  
Snr Urban Designer, Manningham City Council  
Co-Author: Ms Patricia Galan, Manningham City Council

I’m sorry? Rebuilding relationships and rapport through collaboration with the community

When a community-owned piece of infrastructure was destroyed to make way for a large Council-led project, Council’s urban designers faced some challenges. In the wake of community devastation, how could Council rebuild relationships and rapport with the community to facilitate desirable urban design outcomes? How could Council demonstrate community care without saying ‘I’m sorry’?

This paper explores the strategies employed by Council to rebuild damaged stakeholder relationships through empowerment and the creation of a sense of ownership. It reflects on the experience of initiating a collaborative design approach with community and the effect of this approach on restoring stakeholder relationships - and building new ones.

We will demonstrate how engagement strategies have influenced the design process and expected outcomes whilst generating critical sense of place and pride within the community. Finally, we will show how Council’s experience in rebuilding relationships and rapport with the community can be replicated in other collaborative models and design projects, with analysis of the cost (and abundant other) benefits of employing a collaborative design approach.
“Artificial Ecosystems” - Urban Architecture

From Welwyn Garden City in England, through the work of Corbusier in the 1920s with his Contemporary City and on to the 1960s with Archigram and the Japanese Metabolists architects have striven to create ordered urban design.

But to concentrate on urban architecture alone is to play with sandcastles in the face of the oncoming tsunami of urbanization and overpopulation, ecological changes, air and water pollution, diminishing fossil fuel reserves and the global warming consequences of continued use of these fuels.

In considering this crisis a new generation of proposals is emerging based on green energy and sustainability, with a contribution on parametrics from architects.

However, these proposals are likely to be powerless in the face of the oncoming tsunami of environmental desecration unless government institutions and private sector actors get their act together collectively and effectively.

Planning, environmental management, education, statutory enactments, transport, smart growth, Multiple Intensive Land Use, immigration and migration policies, tourism, zoning and urban design must be synthesized under an Environmental Czar.

In recognition of this approach the environmental goal now is to create “artificial ecosystems” – cities that achieve the same interdependent efficiencies as natural ecosystems.

The proposal is to consider the application of this comprehensive approach in 3 locations:
1) Kong Kong
2) New York
3) Maroochydore, The Sunshine Coast, Australia

Involving very different locations in terms of general governance, the proposal will select study sample areas, apply the concept of interdependence and then examine conclusions to try to indicate potential for success.

Some 50 years ago environmental conservation became a global concern. Various computer programs were designed to seek a solution to the growing environmental degradation. None of these programs produced a satisfactory result. Nothing has changed since then. The Earth will survive environmental catastrophe, but Gai’s Gods (us), may not, unless we collectively wake up.
A Sustainable City is an Inclusive City: Collaborative Planning and Universal Design

Our Cities are more than a package of zonings, buildings and infrastructure, they are places of human activity of many types and objectives intertwined with challenges, experiences, hopes and dreams. While there have been, and are still perhaps, instances where the planning process has been mystified and dominated by bureaucrats and professionals, there is now increasing acceptance that an inclusive development process is a way of recognising that the city is our collective responsibility and that its use and function is a product of people of all abilities and status and their use, adaptation, modification or abandonment of it as a whole or in part. An inclusive process typically embraces a collaborative methodology of “engagement“, from the beginning of a project, involving a broad range of stakeholders not merely professional expertise.

The World Health Organisation supports this in the project development process:

“Healthy cities are all about local involvement”.

“Where people live affects their health and chances of leading flourishing lives.

Communities and neighbourhoods that ensure access to basic goods, that are socially cohesive, that are designed to promote good physical and psychological wellbeing, and that are protective of the natural environment are essential for health equity.”

The combination of a collaborative methodology with the discipline of Universal Design (UD) provides a framework and principles for advancing the inclusive aspect of achieving a sustainable living environment. This is particularly relevant when considering Australia’s response to United Nations declarations committing to targets for the Housing Sector to increase quantities of accessible housing.

This paper suggests that more collaborative project development processes plus the implementation of Universal Housing Design (UHD) can potentially lead to more sustainable environments contributing to Social capital as well as Physical capital.
Inter-view: The contribution of urban design panels to Auckland's Urban Story

Auckland’s aim is to be the world’s most liveable city. Auckland Council is committed to achieving this by working with all public and private developments across Auckland to realise good design within our built environment.

Inter-View presents a decade and more of a focus on the value of urban design in Auckland. The publication records a critique of Auckland’s experience of design quality and highlights both public and private exemplar development across the region. Insights from leading professionals within the built environment sector, alongside reflections from Auckland residents, provides both a personal and professional view on the most loved buildings and spaces in Auckland and the reasons for their success.

This visual essay of the city presents 10 projects that were reviewed by the Auckland Urban Design Panel or its predecessors, which have contributed to the growing pride in Auckland’s urban buildings, places and spaces.

The ‘urban design in Auckland’ book recall the evolution of urban design panels across the Region, including the call to action that lead to the Auckland City Panel in 2003, Manukau’s response to the NZ Urban Design Protocol in 2007 and Waitakere’s design panel to guide the landmark Hobsonville Development. The book’s publication provides an opportunity to recognise the significant milestone of 10 years since the launch of Auckland City’s Urban Design Panel.

The book highlights the importance of a commitment to quality design to the aspiration of being a healthy, safe, economically prosperous and beautiful city; and will remind us all of the risks of letting this commitment slide.

Moving into the next decade for urban design in Auckland, the publication documents current Panel members views on ‘where next’ for urban design in Auckland and the challenges ahead.
Tropical Urbanism: Cairns a City in a Rainforest

Biophilia is a term that describes the extent to which humans are hard-wired to need connection with nature and other forms of life. It means that cities and their environment, and in particular their natural context, are inextricably linked. In Cairns, this connection is intrinsic due to the overt presence of the natural environment. The relationship between built form, planning and landscape in Cairns is expressed as Tropical Urbanism; the integration of landscaping and tropical design elements into the built environment.

Cairns Regional Council has embraced Tropical Urbanism through its City Centre Master Plan and its implementation and through a contemporary policy position in its draft planning scheme.

One of the signature design elements of the Tropical Urbanism is the ‘street canopy’ – an architectural expression of the natural rainforest canopy. The street canopy aims to raise the height of conventional awnings in the city, and provide a generous and activated interface to enable strong visual and physical connectivity between the street and the interior of buildings, while providing protection from the elements.

The abundance of green landscaping is a predominant characteristic of the image of Cairns as a ‘city in a rainforest’. In an innovative move, Cairns Regional Council has incorporated requirements in their planning scheme for a percentage of vertical landscaping on each façade of buildings within the urban plane. This outward expression of the ‘city in a rainforest’ has additional visual, sustainability and biophilic benefits ensuring that tropical urbanism will prevail into the future.

This paper will explore how Cairns Regional Council is embracing the concept of Tropical Urbanism through unique planning scheme provisions and the incorporation of these outcomes into on ground projects.
Mr Marc Bartsch
Director, Planning Australia Consultants

Public Transport Revolution: The Making of Place in Riyadh, Saudi Arabia

The City of Riyadh, capital of the Kingdom of Saudi Arabia is building the largest single metro system at one time in the world comprising 176 kms of track, 85 stations, a BRT and community bus system by 2018 at a cost of $22.5b. This will bring economic, cultural and social change to the city.

A key aspiration of the Government of Riyadh will be a revolution in the quality of public spaces, and the improvement of social and recreational opportunities for the rapidly expanding population.

The Arriyadh Development Authority (ADA), through its administration of MEDSTAR ( Metropolitan Strategy for Arriyadh) is completing a number of projects to build on the Metro Project, and these focus on the importance of public spaces along the metro routes, the TOD opportunities around the stations, and redevelopment within inner Riyadh of a 520 hectare site at a cost of $20b.

The scale and urgency of these projects is due to rapid population growth, city extent, cheap access to motor vehicles and fuel, and the current complete absence of public transport.

In a society where families and singles are served in separate areas of restaurants, and the use of parks is segregated during different days of the week, the delivery of a transport system with a comprehensive and accessible public domain is an expression of potential increased social equity and enhanced community integration. In Saudi Arabia this will undoubtedly be a Great Place.
Vancouver’s MC2 residential development – A Case Study for the funding and operation of integrated heating, cooling and domestic hot water technology

Intracorp’s MC2 residential project provides a total of 554 suites in two towers with a significant rental component and will be complete by December 2015. The project incorporates a first-of-its-kind energy recycling initiative for high-rise residential development.

The MC2 project incorporates Vancouver’s first large scale Air to Water heat pump energy technology coupled with dynamic in-suite radiators that deliver both heating and cooling based on recycling atmospheric energy. The program recycles cooling energy for preheating domestic hot water and reduces overall carbon emissions in the order of 70% from standard gas fired business-as-usual designs. Consumers benefit from direct consumption allocation based on in-suite metering that supports energy conservation and provides system management and performance optimization.

The program provides developers with a financial contribution to support personal in-suite metering and the optimization of energy use and provides energy rate structures competitive with industry standards. Further the MC2 program affords long-term ownership and significant rate reductions based on managed energy use. The seminar will present and discuss the design and implementation program for MC2 and will evaluate how the program fits with Vancouver’s District Energy initiatives now being sponsored by other Municipal governments.

At the conclusion the audience will be knowledgeable with:

- The concept of integrated energy recycling within multi-unit high-rise developments using thermal energy systems and the impacts on capital investment and profitability
- The impact of energy metering and billing technology on operational performance and energy conservation
- The process challenges and opportunities related to carbon emission reduction, LEED compliance and Municipal approval
- Capital cost comparisons between various alternate building energy systems
- The integration of mechanical systems with Municipal District Energy Utilities and Utility rate structures.
Dr Beau Beza
Senior Lecturer, Deakin University

Co-Authors: Dr Jenny Veitch, Deakin University, Mr Frank Hanson, Metropolitan Planning Authority

Improving the health of Australians by applying evidence from behavioural epidemiology to Urban Design projects

Urban population growth and the required supporting of hard and soft infrastructure in Australia is expanding rapidly. In the State of Victoria, directing this growth are a number of urban design and planning mechanisms that provide a ‘blueprint for development and investment’. Although topics revolving around physical health are present in these and other planning related documents, largely absent from this literature are ‘tools’ to assist decision makers in determining whether or not an urban setting supports physical health and provides opportunities for physical activity.

Insufficient physical activity is a risk factor contributing to Australia’s growing and significant burden of chronic disease including cardiovascular disease, Type 2 diabetes and obesity. The potential of the built environment to influence population-level physical activity is well recognised. A key element in Victoria’s planning framework that can address these health concerns is the provision and redevelopment of open space(s) in urban areas that provide opportunities for people of all ages and abilities to engage in physical activity.

However, in the realisation of these settings, health related data that is linked to urban open space(s) design is needed to produce evidence based decision making. Using the three geo-spatial visioning layers embedded in Victoria’s planning framework (i.e. Growth Area Framework Plans, Precinct Structure Plans and Planning Permits) as positioning instruments, this paper merges the fields of behavioural epidemiology and urban design to: i) provide an overview of current research relating to design of open space to optimise usage and physical activity: ii) identify what type of evidence relating to features of open space is needed to help inform decision makers, iii) the methods and procedures practitioners can use to generate this data, and iv) at what geo-spatial development level does the respective data best assist decision making to achieve positive gains in physical health.
Cities vary widely between geographical and climatic locations. Even within the same country, regional differences can mean that more than one size is needed to fit all cases.

This presentation demonstrates some of the burgeoning issues facing us as we move into a time of increased climatic uncertainty, elevating health issues relating to building operation such as asthma, and those affecting an aging population. It looks at how we can use existing Standards and designs to better protect building occupants to provide increased resilience and sustainable life styles.

During heatwaves there is a 46% increase in emergency cases submitted to hospitals, and almost three times the number of cardiac arrests. Twice the number of people died in Victoria, Australia from heat stress before the 2009 Black Saturday bush fires than during the fire; heat alone caused the death of 374 people compared to 173 deaths resulting from the fire. The bush fire of 2013 again saw lives lost from heat waves in Victoria. Flooding has resulted in billions of dollars of damage and exposure to mould in our buildings.

Temperature, wind and rainfall extremes threaten us, not just mean temperature, the focus of climate change model outputs and publicity to date.

Increasing evidence points the finger at reducing fresh air in our city buildings as the culprit affecting a broad sector of the population. Research showed asthma rates in low socio-economic groups in Cornwall in the United Kingdom increased when retrofitting energy efficiency measures that reduced ventilation and trapped moisture causing condensation. Australia has shown increased asthma rates in otherwise healthy middle aged men living with visible mould.

As climates change and building resilience is tested we should consider how we design and retrofit our workplaces and homes to provide a sustainable environment to thrive and survive.
Ms Emma Booth
Design Team Leader, North Sydney Council

Cool thinking in an overheated market:
How an inner city council became a master of infill development

St Leonards is a major employment centre on the Pacific Highway, split between three councils and subject to a rampant housing market. The centre has been described as dull and lacking soul, there’s no open space and nothing to do. Despite its problems, land commands a premium with a 220m2 property being listed for $3.5 million earlier this year – a sign of the times in Sydney.

An approval for a large and uninspiring residential tower in the centre of St Leonards under the unpopular and now repealed ‘major projects’ legislation spurred North Sydney Council into action.

At a time when the message is that NSW is ‘open for business’ and projects representing the good, the bad and the ugly are being fast tracked, Council convinced landowners to cool their heels whilst a more positive, community-endorsed, high-density vision for the area was developed with design excellence and public infrastructure placed squarely at the centre of the decision-making process.

This presentation examines how North Sydney Council worked with State Government, developers and the community, using ‘fuel’ from the overheated property market to steer development towards a greater sense of place for St Leonards, built on strong urban design principles. Residential capacity is being increased, car parking rates halved, and employment space protected with the aim of transforming St Leonards into an exemplar of modern, transit-oriented development.

Critical to the success of this vision is targeted investment in public infrastructure. We are delivering 8,000m2 of open space, two childcare centres, a major arts space, an indoor sports centre and a suite of streetscape upgrades. To top it off, State Government has just announced a metro station for the centre.

It’s a bold vision that has generated enormous amounts of interest from the development industry, keen to implement a shared future in St Leonards.
Recognition of urban design as an important element in major infrastructure is generally well established in the Australian context and the role of urban design in shaping cities is supported at a high level by ‘Creating Places for People’, the national urban design protocol. However, in practice, how urban design is incorporated into the process to positively influence the design of major projects is less well-understood. Based on experience in major infrastructure projects in Melbourne including the Melbourne Metro, a proposal for twin 9-kilometre rail tunnels and five new underground stations through the city’s CBD, and with reference to Crossrail in London, our paper outlines some key observations and benefits that urban design has brought to major rail infrastructure projects in the Melbourne context, highlights challenges to reaching good outcomes and makes recommendations for improving the integration of urban design in major infrastructure projects.
The future of the "City in the Garden".
Exploring high density and high quality urban livable environments for Singapore

It is unquestionable that the urban planning model and policies implemented in Singapore over the last fifty years have been very successful, transforming a third-world country into one of the most developed, green and efficient cities in the world.

In the 60's Singapore adopted the British New Town and the Garden City approach to plan its neighborhoods, integrating residential areas with a town center, parks, communal facilities, commercial and industrial activities. However, although the approach has been maintained during these years, and Singapore is still called "A city in the Garden" full of New Towns, the city has experienced an evolution towards a more responsive model to the changing needs. But, has this evolution led Singapore to become a livable city? Is it still a garden? Is the urban model efficient, people friendly and people oriented?

In 2013, the Singapore government formulated two key documents. On the one hand, the Population White Paper: A Sustainable Population for a Dynamic Singapore, which projected a possible population range of 6.5 to 6.9 million by 2030 to address the country demographic challenge, and on the other the Land Use Plan to Support Singapore's Future Population, which envisions the urban spaces and infrastructures with the strategy of preserving a high quality living environment and creating one of the most liveable cities in the world.

Due to this future scenario, Singaporeans, the neighborhoods, and the city are facing new challenges ahead. A debate and reconsideration of the existing urban model is necessary in order to face new challenges such as density, productivity, or the quality of life in a welfare society.

Using the Urban Ecology (S. Rueda) as a methodology, and based on mapping and the quantitative analysis of 25 urban indicators, this research analyzes the existing reality of the neighborhoods in order to understand their liveability. The paper explores the physical and morphological conditions of neighborhoods focusing on five elements: living, working, services, mobility and open space. Built on this research data, the paper concludes with the critical aspects and visions that Singapore neighborhoods will have to deal with in the future in order to achieve high density and high quality urban livable environments, that meets the changing needs and aspirations of a more diverse population.
Dr Nigel Cartlidge  
Principal, Transitions: People, Place and Activity

A Research-based Model for the Design of Public Space in Beach Precincts

This paper has emerged from a mixed methods case study of the urban design of three different beach precincts on the Gold Coast, Australia. The intent of the research was to understand how people value, use and relate to urban beach precincts so that their design, planning and development may functionally reflect the role that they play in people’s lives.

The contemporary concept of urban design reflects the architectural, urban design and planning practices which are based on land-use planning oriented to the laissez-faire political doctrines that have dominated post-war development in Australia. Urban design guidelines have no statutory basis in Queensland in the governance of development. They are seen as advisory and open to definition by the dominant groups who control the governance of the Gold Coast, a city largely created by the influence of mass tourism and lifestyle products.

The case study identified that the dominant and special interest groups on the Gold Coast have designed public spaces that create constituencies of advantage and disadvantage. This has arisen due to the provision of public facilities that support favoured activities in the public foreshore parks and by private ownership of nearly half of the foreshore. This limits egalitarian access to the social, recreational and restorative benefits of the beach precinct.

This paper proposes an urban design and planning model for beach precincts developed from a case study which supports public access to activity, amenity and facility to restorative environments. This is intended to incorporate into the design of those precincts, the values associated with beach precincts. These values are relaxation, restoration and connection to nature in inviting, comfortable and secure public places.
The Value of Place: Measuring the economic benefit of place design

Place making has become a normalised concept and a natural process in the creation of cities and precincts for the twenty-first century. However, it is often seen as a 'nice to have' rather than an integral component the urban economics of a place.

This presentation investigates the value of place, a means of valuing or monetising place, by challenging existing economic models and creating new ones. The presentation focuses on the principles of design thinking, rather than traditional business thinking, to achieve exemplary place outcomes. It reviews and reflects upon competitive advantage as a means of creating and making great cities, and applies this thinking to place in the context of retail based activity centres.

Valuing place is a highly complex task. This presentation seeks to simplify the process and define the economic benefit of place creation in order to ensure the ongoing highest-quality delivery of our cities.
Mr Michael Cullen  
Principal, Urbacity

Co-Author: Mr Daniel Khong, Urbacity

The Activation of Auckland’s Wynyard Quarter - Implications for Form & Function

Many urban renewal projects on brownfield sites struggle to manage the creative independence of multiple architects around a goal of buildings common in conversation at pedestrian scale. Often brownfield projects are renowned for a primary focus on market appeal of built product but compromised public realm outcomes.

In possibly New Zealand’s largest ever brownfield project at Wynyard Quarter, sandwiched between Auckland CBD and its harbour, Waterfront Auckland engaged Urbacity (Sydney) to assist it to provide controls that require buildings to talk to each other and to come to ground in a manner that delivers a neighbourhood composed of contributing buildings, and not an institutional mini-CBD.

The regulations recognise common factors that make places walkable and active. As the accepted walkability built standard is traditional design, a tension arose as to how to apply pedestrian focused design references to the lower levels of buildings, whilst encouraging creative independence in the overall design process.

The controls proposed seek a duality of references for project architects by requiring an equal focus on walkability and neighbourhood-scale for buildings often of 20 storeys, along with that of market relevance and status.

Waterfront Auckland’s Ground Floor Activation Strategy is a means by which the functional and physical elements of the renewal project are intended to come together to deliver on Waterfront Auckland’s objectives of Wynyard Quarter as “A world-class destination that excites the senses and celebrates our sea-loving Pacific culture and maritime history. Its supports commercially successful and innovative businesses and is a place for all people, an area rich in character and activities that link people to the city and sea”.

The presentation will go through the myriad of objectives facing Waterfront Auckland and its project partners and designers, and the regulations seeking a “neighbourhood” of multi-storey buildings.
Mr Guy Dixon  
Managing Director, NINA Pty Ltd

**A New Urban Adaptation Technology for Water Independence, Zero Carbon Emissions, Economic Growth and Productivity Gains**

Despite the majority of both Australia’s and the World’s population being urbanised, the operating systems of the urban environment (water, electricity, gas, lighting, ICT) are poorly designed and ill suited to the needs of 21st century life. That urban environments are under water stress in not due to a lack of water per se, though droughts are an aggravating factor that focus social and political attention, rather it is a design failure of our urban operating systems to manage both urban rainfall and water imports from natural sources external to the urban environment effectively.

A technical reinvention of these systems is critical to achieve urban sustainability and societal resilience flowing from economic and productivity growth and improvements in overall quality of life we present a technical reinvention of the operating systems of the urban environment, it is called the NINA Access Pathway.

The NINA Access pathway is a radical departure that focuses on transformation of distribution architectures to achieve both water security and a low or negative carbon economy. It is a physical ‘operating system for systems‘ enabling new sources of water to be harvested and redistributed, clean energy to generated. It increases the economic competitiveness of: new clean power sources by bypassing high cost distribution: new ICT systems; new lighting, and smart city systems. By allowing them to bypass inefficient distribution models, it enables a faster take-up and greater market penetration of electric vehicles. Economic benefits are maximised and resistance minimised where an innovation is: commercially viable (provides economic returns to the providers of capital); most people are better off and, there are no losers, economists call this Pareto Efficiency. The NINA Access Pathway has superior economic performance and social inclusiveness as design objective.

Economies of scope and scale are captured, value is added to the urban landscapes streets, houses, businesses and ecology, commercial rates of return support a diverse range of funding options.
Ms Irene Duckett  
Director, Ireneinc Planning and Urban Design

Minha Casa Minha Bicicleta - Cycling as a mobility strategy for the urban poor in Brazil

minha casa, minha bicicleta  
(my house, my bicycle)

Cycling as a Mobility strategy for the urban poor in Brazil

Responding to rapid urbanisation and a growing crisis of affordable housing (estimated as a deficit of 7 – 10 million houses), the Brazilian Federal Government established the social housing program Minha Casa Minha Vida (my house, my life), with a target construction of 2 million housing units across Brazil.

The structure of the programme however is intrinsically flawed, creating greater social housing issues, isolated and alienated communities, at a massive scale. In Brazil and around the world, social housing experts are watching with dismay as this program creates more issues than it resolves.

Taking the conference theme of empowering change, this paper examines the shortcomings of government policy in relation to social housing and transport, and the feeling of disenfranchisement experienced by the community and professionals in the face of such large scale government programs.

As an alternative to combat the social impacts, empowerment is explored as a grass-roots movement, through examining the evolution and adaptation of cycling culture in Latin America, and utilising this as a vehicle for change among communities. Applying this cycling culture to a case study of the housing estate Vista Bela, in Londrina Brazil, this study explores how social reform, economic opportunities and increased mobility could be effected through three community run bicycle themed programs.
How should built form and landscape interact? How, and in what circumstances, should landscape qualities affect design briefs and urban form? Can landscape characteristics and landscape significance be documented objectively? To what extent can planning schemes improve this relationship?

The landscape component of urban design is often thought of in only two ways – the design of public spaces, and the garnishing of private spaces around a building. A third dimension – the interaction between siting and design of buildings and landscape character – is at least equally important, and forms the topic of this talk.

How should this interaction occur? In the old world of Europe and Asia, the question didn’t arise because everything was local. Cotswold villages nestle into the countryside because people had to walk to the paddocks. They are built in beautiful, honey-coloured stone because bricks or tiles could not be transported cheaply.

Today, few if any such constraints apply. Development is footloose, often with unhappy results such as urban sprawl and degraded landscapes. Community pressure forces us to ask hard questions. How should cities meet the countryside – hard edge or soft edge? Should there be ‘no go’ zones for wind farms? What should a ‘green wedge’ look like on the ground? In what circumstances should buildings be hidden from view?

The formulaic prescriptions of zone-based planning systems often fail to address questions of this kind. Further, there is widespread scepticism about attempts to objectively define landscape qualities in planning schemes. Yet Victoria is close to completing comprehensive coverage of the entire state with landscape protection guidelines and controls that are proving to be effective and accepted.

This talk will explain how a transformative innovation in methodology, coupled with public pressure, empowered this successful program.
Applying the AURIN Portal to Health Service Planning within an Urban Setting

Australian cities are growing at a rapid rate. In response to this the Federal government has funded the Australian Urban Research Infrastructure Network (AURIN). AURIN provides an interactive portal facilitating the search, upload and visualisation of spatial data. The portal contains over two thousand datasets accessed via a federated network from across Australia. Reaching far beyond the capability of a traditional spatial information system, the portal thus provides essential data for city design and policy formation.

This paper illustrates the capacity of AURIN to assist with health planning. In Australia health organisations are under increasing pressure to rationalise and effectively utilise scarce resources. We discuss an approach which was taken to analyse and advice on the allocation of services for children in the rapidly growing area of Melbourne's North-West region.

AURIN teamed with the Department of General Practice at the University of Melbourne to provide spatial analytics. The visualisation of health care service data in an interactive map enabled the understanding of spatial relationships that were not evident previously. Additional information from the AURIN portal, such as population density, transport catchments and land use, allowed a more complex understanding of the city through walkability and street connectivity. Policy makers can now easily identify clusters, gaps and potentials in service provision, assess the related policies, translate evidence from literature into practice and measure the success of interventions over time. Using data to understand the state of the neighbourhoods and future needs, we can improve policy development for inclusive, sustainable and healthy communities.

This approach, referred to as an Urban Observatory, is intended to reinforce and improve planning and policy making processes. By compiling and visualising data into accurate and easily understandable maps, it has the potential to become a monitoring tool for urban policy. Decision makers can then identify local priorities, formulate policies and assess their successful implementation through periodical data updates.
Brisbane City Centre Master Plan 2014

Brisbane is on the brink of an exciting period of transformation and economic opportunity. Our city centre is growing rapidly with 50 new towers and a doubling of pedestrian trips anticipated over the next 20 years. This strong economic outlook together with the riverfront location and subtropical climate present fantastic opportunities for our city’s heart.

Brisbane’s City Centre Master Plan 2014 sets out a bold vision to guide future development and investment to create Australia’s New World City. The master plan sets out 10 city-making moves that will transform our city over the next 20 years. Priority projects are also identified to be delivered within the next 5 years, including new riverfront precincts, street upgrades, a new pedestrian bridge and major public transport infrastructure.

The master plan was guided by community input from the Ideas Fiesta which encouraged the Brisbane community to explore the future of their city centre through a 3-week program of events across the city. Over 16,400 people attended 27 events including street picnics, guided walks, laneway events and industry workshops. Online platforms also generate a significant range of ideas and discussion, resulting in more than 1.2million social media views.

The transformative projects outlined in the master plan represent effective and affordable steps to be taken by Council, State and the private sector to accommodate growth and capturing future opportunities. Brisbane City Council formally adopted the Brisbane City Centre Master Plan 2014 on 4 March 2014 and work has already commenced on all 6 of the priority projects.
Designing cities with people: as an alternative to building cities for people

At a time of rapid shifts in our urban spaces, the need for tools to support inclusive and engaged communities and cities is key. Urban development changes the character of neighbourhoods, and while this can be potentially detrimental, it can also be a community building, socially empowering process.

This lecture will suggest that the way to do this is by developing urban design practices that create with communities, instead of for them.

It will explain and show how including all groups, from the young to the old, in the design of their neighbourhoods, has the unique possibility of harnessing local knowledge to the betterment of decision making. But this is only the start.

By opening up the design process to the public, you offer the potential for profound change, not only on an individual level but also for the wider community. Education, empowerment and personal development on one hand; community cohesion, economic development and social change on the larger scale.

The potential benefits are there to see, and there is extensive research to support the link between engagement and improvement. What is missing, however, is a tested toolbox to activate this process, meaningfully and effectively.

This lecture will highlight the work that Rasmus has been doing with arki_lab, his Copenhagen-based urban design firm specialising in process-orientated, democratic design. In particular, it will provide innovative and inspiring examples of working with young people in and outside of schools, and explore how the use of a few simple technologies and devices can provide a stimulating framework for citizen involvement.

In this way, Ras’s presentation of case studies and best practice examples from arki_lab’s projects will start to fill in the gaps missing from the toolbox, showing municipalities and other decision makers the way forward in this important urban design practice.
Mr Paul Gallagher  
Principal Project Planner, Sunshine Coast Council

**Re-creating Urban Spaces for Informal Sporting and Recreation Activities through the Use of Mobile Technologies on the Sunshine Coast.**

The Sunshine Coast is renowned for its active, outdoor lifestyle. The population on the Coast is forecast to double to 500,000 people over the next 15 years, which will create pressures on space for sport and recreation. In recent years there has been growth in location based, self-tracking technologies supporting recreation. The data being uploaded from these devices indicates that recreation and sport is more adaptable and not place specific.

The presentation will illustrate how as our cities have grown and evolved our view of the road has shifted from a shared space to one which is increasingly hostile to anyone except the motor vehicle. With over 800,000kms of road in Australia, which equates to approximately 34m of road per person, the presentation will challenge the audience to reconsider what is the purpose of the road. Furthermore, in situations of increased densities, the hostility of urban spaces and roads is and will be counterintuitive to supporting informal and accessible sporting and recreation.

Fundamentally, the presentation acknowledges the study of Urban Informatics and expands on its research by exploring the use of location based, self-tracking apps – specifically Strava – to reveal the use of space for recreational cycling across the Sunshine Coast. The Strava app was specifically designed to allow users to self-track their activities (Cycling, Running, etc) via their GPS enabled devices and for that data to be uploaded to the Strava site to be shared with users, peers and friends on their social network. The presentation will show how the field of Urban Informatics and apps like Strava offer a new insight into how people are using space, which could assist in the future design and use of space for sports and recreation.

This presentation will include perspectives and findings from experts in the fields of urban design, planning, active transport and the Sunshine Coast cycling community. Including, the extent (or lack) of Digital Media Literacy and its limited application through to contrasting examples of participation in recreational cycling on the Sunshine Coast based on actual data extracted from Strava.
Mr Dale Harrop  
Urban Designer, City of Perth

Co-Author: Dr Andreas Wesener, City of Perth

'Let’s make a prototype': Exploring temporary urbanism in the form of transitional urban design schemes that can be tested prior to permanent implementation

Temporary uses of urban spaces are generally not foreseen in urban planning and design have been often connected to urban disturbances and disorder. However, temporary uses might also help reveal, elicit or test alternative urban design ideas, for example by adding or enhancing aesthetic or functional characteristics for a limited period of time. From that perspective, temporary urbanism could be conceptualised as an envisioned type of urban design rather than a substitute for permanent development.

Urban design schemes have been critiqued in regard to design goals that have not been met after implementation. This is indeed a risk, even for well-designed projects, in particular with big budget schemes. The paper discusses processes that may help minimise risks by testing urban design schemes prior to permanent implementation. Following on from Christchurch’s transitional city programme facilitated by local government and community organisations, the paper explores ideas regarding utilising transitional urbanism to test urban design schemes.

Drawing on empirical research during Christchurch’s post-earthquake recovery process, international case studies and a critique of ‘traditional’ urban design processes, the paper discusses the benefits of temporary urbanism and argues that temporary schemes could help detect potential issues that may arise post implementation at an early stage. The discussion advances the use of ‘low-budget’ urban design schemes in order to test ideas before permanent solutions are implemented, thus creating a successional urban design process. This process has the potential to assist urban designers and property developers in sourcing solutions to urban design problems through low budget means in austere economic conditions.
Reinventing Neighbourhoods: Will Millennials Transform Neighbourhood Design?

Today's under-35 Millennials are the most connected, global generation in history. They are increasingly mobile, digitally native, have a preference for 'portfolio' multi-pronged careers rather than traditional employment and will have up to 70 jobs in a lifetime (FYA, 2015).

If this change in lifestyle is to be the new norm, then it has huge implications for the way we plan and design neighbourhoods. Traditional neighbourhood design has relied on a relatively static population, with a strong attachment to a local place. Now there is a need to adapt to an increasingly transient culture, with increased online integration, while still creating local places are healthy, inclusive and resilient.

Current approaches to planning don’t easily allow for this level of flexibility. Long-term planning horizons and top-down decision making make it difficult for the resultant plans to adapt to rapid changes in local identity, culture and lifestyles.

This presentation will argue for the need to adopt more adaptive, flexible approaches to neighbourhood building, such as tactical urbanism, alongside long-term planning frameworks to tackle this generational change. Tactical urbanism is internationally proven approach to neighbourhood building uses short-term, low-cost improvements to streets and public spaces, to catalyse long-term change (Lydon, 2015). It allows for testing of ideas resulting in flexible and iterative design outcomes which can more readily respond to demographic and cultural changes.

Through the lens of youth-led projects, including the Hepburn Youth Strategy which engaged over one third of young people in the municipality, this talk will illustrate how tactical urbanism, co-management of public space and effective youth-engagement can help build a framework for Millennial oriented cities.
Mr Kevin Hayes  
Chairman and Founding Director, Hayes Anderson Lynch (HAL) Architects  
Co-Author: Dr Emma Felton, Hayes Anderson Lynch (HAL) Architects

**Living the Dream: the design, development and experience of a small-scale creative hub in Brisbane**

This paper presents a study of an innovative urban design and architectural project, Bakery Lane, Brisbane, which is designed as an entrepreneurial creative hub. The Bakery Lane precinct is a first of its kind in Brisbane, challenging conventional town planning development usage and regulations.

Situated in inner-city Fortitude Valley in a disused laneway, the accommodation combines studio, living and retail space in a series of small heritage buildings centred around a central piazza. Each building is designed for creative entrepreneurs who are establishing start-up businesses, and are able to keep overheads low by living, working and exhibiting or selling from a single premise. The precinct forms what is commonly known as a ‘creative cluster’ whereby inhabitants can share and generate ideas, skills and in some cases costs. Many studies have identified the benefit of creative clusters for urban economies and regeneration in cities across the world (Florida 2002, Pratt 2008). The addition of retail space helps to create a vibrant urban amenity, drawing people to the area.

The development completed in early 2015, required considerable negotiation with local planning authorities for so the re-purposed buildings to have multiple uses: to live, manufacture and retail. The buildings are re-purposed in a sympathetic manner to the original architectural style and to the sub-tropical characteristic of the city. This paper explores the negotiation process and outcomes for those people who are now living and working in Bakery Lane.
Mr Malcolm Holz  
Director, Holzink

Co-Author: Mr Michael Kane, Holzink

Achieving medium-high density in low scale development: The Queensland experience in innovative ‘fine-grained’ urbanism

Worldwide population growth and economic agglomeration is driving increasing urban density within larger metropolitan conurbations. Population growth and housing diversity and affordability issues in Queensland have seen an increasing demand for more diverse and higher density development. Under Queensland’s flexible planning regulatory provisions, a level of ‘medium’ to ‘high density’ is being achieved by a focus on fine-grained urban design, low scale development, lot diversity, and delivery of single dwelling products.

This for Queensland (and Australia) has been an unprecedented innovation in urban and dwelling design. Dwellings are being delivered on lots with zero regulatory minimum sizes providing for a range of new products including ‘apartments on the ground’. Initially the province of special State zoned ‘Priority Development Areas’ (PDAs) planning mechanisms and design provisions are also now being mainstreamed in local government planning schemes across Queensland.

This paper reviews recent and nascent examples of PDA development projects and local government planning schemes, and examines fine-grained urbanism principles, identifiable within historical ‘vernacular suburbanism’. The concept of a preferable ‘natural density’ linking human scale built form with walkability and access to ecological amenity is also considered.

The paper challenges the notion that (sub)urban development needs to be of a higher scale to achieve density and diversity aspirations and suggests multiple dwellings could become unnecessary outside major city centres.
Mr Chris Isles
Group Planning Director
place design group

Designing places that people want, (not just what they think they want).

The world around us and how we interact with it is changing. It was only eight years ago that the iPhone was invented and yet few of us can even remember a time when we didn’t have phones constantly within our reach.

Historically designers and planners have been educated and trained to work in a data poor environment. We have relied upon design instincts linked with statistics, projections and estimations to fill in the gaps in a data poor environment.

So with an increasing dependence upon technology, comes the advent of the new era of ‘big data’ and ‘crowd sourced data’. We have access to a range of new data sources, including distributed sensors, infrastructure monitoring, remote sensing, social media and mobile phone tracking records. Given the availability of this data, is it reasonable or perhaps even reckless for us to continue to design in a vacuum?

The combination of traditionally used, often covert big data sources, matched with newer and more publicly visible crowd sourcing techniques is on the rise... and it’s a powerful combination.

Together, these two forms of data if utilised as an urban design tool will allow us to deliver better cities for people, that even they never knew they wanted, whilst also allowing us to design and plan for places based around how people use spaces, not how we think they will use them.

Chris will discuss how both big data and crowd sourced data can be applied to urban design to significantly enhance the creation of true cities for people, and the way in which they live, breath, eat and play within it.

Conference delegates will gain valuable insights into this growing area. They will leave understanding how this can apply to their own daily practices, and why our phones, our credit cards and user driven apps are presenting as a brand new era of tools of the urban design profession.
The paper discusses examples of the State of Art of eco-positive quantification of proximity to Sustainable Design for natural, built and city systems. Since 2007, life cycle benefit analysis (LCBA) has been developed in Queensland to model regeneration beyond environmental degeneration. The aim is to meet stakeholder needs for positive futures and beyond zero outcomes.

Until recently the international standard quantification system for sustainable design and ecocities Life Cycle Analysis (LCA) excluded consideration of positive regeneration and wellness outcomes. Conservative Life Cycle Impact Assessment (LCIA) was developed to address consumer concern about resource depletion and pollution reduction.

The new eco-positive LCA metrics are adapted from conventional LCIA methods. They can model and quantify urban capacity for and outcomes of regeneration, reparation, renewal, recycling and resilience. To date they cover 50% higher regeneration and wellness metrics that are essential for eco-positive sustainable development.

Whole building life LCA examples are drawn from using local and imported metal and concrete roofing, timber and composite cladding, Aragonite concrete, PCR insulation and floor covering, natural and synthetics fabric and porcelain tiles versus worst case Business as Usual (BAU) approaches.

All LCA results are third party certified developed for submission to earn ecolabels. These are in the public domain in Environmental Product Declarations. The authors compare results and discuss how benefit assessment applies in Environmental Building Declarations to meet and go beyond current green building rating schemes.
Development of an urban heat vulnerability index and its applications

This study intends to develop an index for evaluating urban vulnerability to heat. In South Korea, city temperatures continue to rise due to climate change, seriously causing urban heat island effects. In this regard, while many indices related to outdoor thermal comfort have been developed, most of them have been used as an index for indoor thermal assessment, resulting that they are limited to be applied directly to outdoor spaces. This study includes the following research processes to develop an urban heat vulnerability index and examine its applications in urban planning.

First, we developed an urban heat vulnerability index based on temperature-related indices for outdoor spaces including existing thermal environment, thermal comfort, and urban heat islands. The heat vulnerability index developed, taking into account the future usability, was constructed by functions which reflect the indices (population, land use, building density, greenery size, etc.) used in urban planning.

Secondly, we applied the heat vulnerability index to some regions of Seoul selected as a target area. Also, temperature distributions in urban space were identified using AWS (Automated Weather System)-observed temperature data to derive urban heat islands that are significantly warmer than their surrounding areas.

Thirdly, the assessment result of heat vulnerability was used to examine its applications in urban planning. By identifying regions vulnerable to urban heat island effects, we presented a plan to manage those regions referred to as heat island controlled region and typified the regions based on the vulnerability to thermal environment.

The heat vulnerability index proposed in this study can be utilized in establishing urban policies for urban heat island mitigation, considering factors influencing urban space planning. Through further complementary studies, the index is expected to be applied in urban design from a microscopic perspective and architectural guidelines.
Miss Lee-Anne Khor  
Research Associate, Monash Architecture Studio, Monash University

**Optimising uncertainty: a design-led investigation into the challenges of realising urban innovations in a data-driven environment**

Big data has potential to revolutionise the way we manage, use and measure the urban realm. Integrating extensive and diverse datasets will provide new knowledge about the way urban environments are formed and inhabited. But will this increased knowledge translate to increased implementation of new and innovative designs that can transform the existing physical fabric into smarter, more resilient cities?

Barriers to urban innovation have been the focus of many recent research initiatives, largely instigated by the slow adoption of sustainable development practices. Economic viability and conflicting priorities of complex stakeholder groups are common obstacles. This paper focuses on the spatial design innovations, distinct to technological, organisational or operational innovations (although interrelated). Design-specific obstacles include the late introduction of design in the overall development process, a lack of metrics and methods that can ‘quantify’ design benefits over an appropriate lifecycle, and a dissonance between extant urban datasets and speculative modes of enquiry.

This paper presents a design-led investigation into the regeneration of public housing assets in ageing middle suburbs to illustrate some of the challenges associated with delivering real and effective changes in these contexts. The research proposes three intensities of precinct-scaled redevelopment and examines their ‘net’ impact in cost, quality and density terms at neighbourhood-scale. The assessment employs the projective and iterative modes of design and optimisation modeling to examine both short- and long-term development effects and to engage with the differing priorities of sustainable development. The project explores how such a framework could be used to distil multi-objective stakeholder requirements and respond to shifting development priorities as the built fabric evolves, operating conditions change or more accurate data becomes available. Finally, the paper reflects on the role of speculative design thinking for strategic urban decision-making and the challenge of incorporating design-knowledge in urban data platforms.
Host Cities: Harnessing the transformative potential of mega events

Major events have the capacity to change a city or indeed a whole country’s global profile. Events of recent times have been used to achieve bold and ambitious outcomes that go far beyond the sporting or cultural spectacles at their core.

The most recent successes in Barcelona, Sydney, Vancouver and London all majored on the long term benefits for the host cities. In each case the emphasis was placed on investment in infrastructure and the capturing of private sector investment to support the development of new pieces of city. In London, for example, the Olympic programme has dramatically accelerated the process of transforming the most highly contaminated land, the most deprived neighbourhoods and the most poorly connected districts in the UK into a thriving 21st Century piece of city.

Yet there have also been some notable failures, or if not outright failure then lessons for future consideration. The greatest risk is the classic post-event ‘white elephant’ of empty venues, and a perceived waste of precious public money. A well-planned sports venue is not simply a spectacular stand-alone building or precinct. Integrating it with carefully-designed public spaces can improve social connectivity, add value to adjacent sites, and provide a framework around which new communities will grow.

Arup’s role in Host City planning and urban design is wide-ranging, including current work in preparation for the Rio 2016 Olympics, Tokyo 2020 Olympics and 2022 FIFA World Cup in Qatar. Matt will draw on his breadth of experience in mega event planning and urban design to discuss the potential City Making power of major events - taking in the broader view by looking beyond the sport, culture and entertainment activities to explore how to spread the benefits as widely as possible - achieving greatest value for money for taxpayers and sponsors alike.
Mr Alastair Leighton
Associate Director, Design, AECOM

**Ambitious Opportunism: Harnessing a Transformational Dividend from Integrated Community Infrastructure**

I can’t think of anyone who would suggest that creating healthier communities is a bad thing. If that’s true, then why do so many environments fail to optimise community health and well-being?

Evidence suggests that communities in urban environments are becoming progressively less well. Should we therefore conclude that current approaches require a radical overhaul? This presentation will suggest that a fragmented approach to sustaining communities is the biggest challenge, compounded by excessive control that stifles innovation, participation and perpetuates poor performance. It will consider the contribution to be made by ‘good environments’.

What is the role of urban design in this mix? Perhaps the design of urban environments could be the platform for promoting beneficial change, and act as the critical glue to empower communities and achieve transformation. In a climate of austerity and limited budgets, this presentation will consider the critical role of ambition, opportunism and integration to achieve the kind of transformation that many challenged communities need.

This presentation will present a concise summary of activity that seeks to break the mould and achieve powerful synergies through more effective collaboration. It will put the case for a powerful place-based approach to functional considerations that are generally considered as disconnected overlays. It will consider how these may increase health and well-being, encourage greater economic participation and respond to the challenge of ageing populations.

The presentation will conclude that whilst ‘Master Planned’ new communities have top billing, we now need to move rapidly to embrace the more imaginative master planning of establish communities. It will also suggest measures to begin to embrace this approach, to test the concept and achieve powerful transformation in the short term.
The number of multi-level residential developments in Sydney continues to rise, regulated by State Environmental Planning Policy 65 – Design Quality of Residential Flat Development (SEPP 65).

Since its introduction in New South Wales in 2002, SEPP 65 has presented a series of principles intended to elevate the design quality of new build developments and change of use conversions.

Initiated by then State Premier Bob Carr following the rapid development of apartment buildings in the decade leading up to the Millennium, most of which he determined to be of poor aesthetic quality, the document sets out principles in ten areas ranging from energy and water efficiency and safety and security to context, scale and aesthetics.

While much of the attention on the outcomes of SEPP 65 on residential developments focusses on apartment quality, following the original intent of the document, less attention is paid to the impact on the urban realm. Intended to elevate design in the development process, strict adherence to requirements in several aspects, notably in Principle 7 – Amenity, have dictated design with, at times, negative outcomes.

This paper examines the urban design outcomes of high density residential developments constructed after the introduction of SEPP 65 and the challenges it presents to best practice urban design principles.

Using several multi-unit residential developments as case studies, the research will consider apartment mix, active facades and mixed use, and asks if the most recent overhaul of the planning system, including the revision of SEPP 65, places sufficient value in urban design.
Dr Bob Meyer  
Director of Planning, Cox Richardson

Sydney’s Central Corridor as an Innovation District

The Brookings Institute’s paper “The Rise of Innovation Districts in America” outlines the recent trend for innovation firms and their skilled workforce choosing to congregate and co-locate in established, compact, amenity rich enclaves in established urban areas usually in major cities, enabling conglomeration and clustering together with a residential component catering to the knowledge workers who are more transit, walking and cycling oriented.

Sydney has shifted to a knowledge based economy, with knowledge jobs concentrating in the inner areas, with those working in knowledge industries increasingly shifting to live within easy commuting reach of their jobs.

With Sydney’s CBD becoming increasingly off-centre to Sydney’s population growth there is a growing disconnect between those in the fast growing outer western suburbs and the concentration of knowledge jobs in the east. There are therefore two key issues which need to be urgently addressed in any future strategic plan for Sydney:

• Bringing knowledge jobs within easy access to the whole Sydney workforce, particularly those in Western Sydney and;

• Positioning Sydney to compete with other Pacific Rim global cities.

It is suggested in this paper that a key central subregion for Sydney should include the concentration of knowledge jobs, outstanding public transport to provide sufficient housing opportunities for the knowledge workers which will be attracted to the knowledge jobs.

The benchmarks for the concentration of knowledge jobs are the world’s two most successful business centres, those serving London and New York.

The paper will show that Sydney can form such a precinct, the proposed 23km Central Corridor, which incidentally is the length of Manhattan Island.

The corridor fits the characteristics identified by the Brooking Institute of an emerging innovation precinct. A 23km corridor anchored by the dual CBDs of Parramatta and Sydney.
Mr Stephen Moore  
Principal, RobertsDay  

The City of Density

After a decade of focusing on livability, an increasingly generic urbanism is being developed around the world underpinned by a loss of the human scale and fine grain to accommodate formulaic models of density. Density discourse has been largely reduced to a discussion on parking, podiums and towers.

Density, however, means much more than that.

Stephen Moore, a Principal of RobertsDay, will explain the opportunity to create the City of Density, its essential elements (e.g. block and intersection density) and its benefits. In the City of Density, more people choose to walk, cycle and use public transport; more people choose to right-size their lifestyle; more businesses choose to start-up; and more people can participate in city-making.

Drawing upon the firm’s Great Places™ Process, research and case studies from around the country, Stephen will share a creative process for designing, coding and delivering the City of Density.

By understanding the City of Density, it is possible to create our City of Destiny.
Mr David Morrison  
Urban Design Advisor, City of Stonnington

Transforming Chapel Street: 'Evolution' or 'Revolution'?  

There are many questions around the dynamics of urban transformation. What do we mean by urban transformation; transformation for whom; what results are we seeing from this process of rapid transformation; and what are the costs and benefits to our communities?

These questions will be explored against the backdrop of the greater ‘Chapel Street’ area of Melbourne. Over the last 10 years, a significant volume of new high-density apartment developments have been transforming this highly sought-after part of inner Melbourne.

This continuing residential development boom is occurring at densities that far exceed international benchmarks; and is accompanied by other distortions – including the displacement, or ‘crowding-out’, of employment space and jobs from this important inner-urban centre. These, and other, trends point towards a ‘revolutionary’, rather than an ‘evolutionary’, approach to urban transformation.

The implications of these trends for the social and economic well-being of the local area residents and businesses and, by extension, for metropolitan Melbourne, are significant. These ‘revolutionary’ trends highlight the importance of having better planning ‘processes’ and ‘tools’; in order to more purposefully guide the future transformation of our cities.

This paper looks at some of the distortions and unintended consequences of urban transformation; and illustrates how a ‘net community benefit’ perspective might help to improve the way we respond to these pressures.
Can nature be good for our health and the health care bottom line?

An aging population is contributing to ‘spiralling’ health costs within Australia. Innovation and improved efficiencies are required to help manage health spending. Within this context, the recently completed AUD$1.5 billion, 359 bed, Lady Cilento Children’s Hospital in inner-city Brisbane presents an important case study for incorporating innovation in hospital design to promote enhanced healing and wellbeing.

Research shows the significance of nature and the built environment on health and wellbeing. It suggests that access to nature can manipulate our frame of mind and in turn this can affect our physiological and psychological health. Studies have shown, exposure to nature can improve our physiological health by lowering blood pressure and reducing the release of stress hormones. This can have a positive effect on the patient’s recovery and arguably reduce hospital stay.

However, there is limited application of this research to the design and development of contemporary hospitals. This is despite the potential for natural settings to enhance healing and provide benefits to both patients and hospital budgets.

The award winning Lady Cilento Children’s Hospital illustrates the health and environmental benefits that can be achieved through evidence based ‘green’ design. It similarly provides insight into processes and factors that assist in their achievement. Measuring and evaluating the resulting level of success of the Lady Cilento healing gardens will be the focus of research in the near future. Such research has the potential to influence the way health facilities are designed and the general approach to health care delivery within a global context.
Connecting processes and products: The occasionally democratic form of the Wellington waterfront

Urban design practice and research have often been criticized for relying heavily on theory from many other fields rather than establishing its own, over-emphasizing form, and for not effectively connecting social science and design. However, the relationship between the process and products of urban design has been identified as a suitable focal point for the discipline to address these criticisms. In support of this proposed central theme, this paper reports on analysis of the morphological and governance history of the redevelopment of Wellington's downtown waterfront.

The research identified how the governance of the development process itself influenced the built form. This governance - built form relationship is described through analysis of relevant literature, policy, and interviews with a cross section of participants in the development process.

The findings illustrate those elements of governance that identify and prioritize the values that directly influence the built form and how overall styles of governance also affected the form of the projects. For example, we see how fluctuations between more inclusive and less inclusive modes of decision making contributed to the existing mix of features and spaces, including what did not get built.

In addition to providing insight into the cumulative effects of 30 years of urban design practice, these results illustrate the variety of connections between the processes and products of urban design.
Mr Michael Powell
Associate Director, Skidmore, Owings & Merrill LLP

Baietan Urban Design Master Plan: A Prototype for Eco City Design

The Skidmore, Owings & Merrill City Design Practice is a collective of many design studios throughout the world that share a commitment to achieving a more urban and a more balanced relationship between our larger built world and our natural systems. The concept of Eco-City, which is the focus on this presentation and discussion, is central to the principles that guide our work. As urban designers, we are inspired by the challenges of reinventing the world’s cities for this century, with the understanding that all things, natural and manmade, are connected.

This presentation centers on the Baietan Urban Design Master Plan as a prototype for Eco-City planning on a vast scale. The project proved to be a once-in-a-lifetime opportunity for the Skidmore, Owings & Merrill urban design team to address the population growth and urbanization that characterize today’s China, which often times comes at the expense of ecological systems. Perhaps more than anything else, the Urban Design Master Plan proved that development density, comprehensively planned and innovatively executed, is fundamental to successful urban revitalization, ecological renewal, and sustainable city growth. The project provides a practical vision for a sustainable and restorative human settlement and provides a framework for urban redevelopment that achieves a greater balance with living systems.

The challenge presented to the design team involved a 35-square meter area of the Pearl River Delta stretching between the outskirts of Guangzhou, with its 5.0 million inhabitants, and the 3.4-million population city of Foshan, 20-km to the southwest. Urban growth and development region was leading to the two cities merging into one sprawling, undifferentiated urban entity. A key challenge for the project was its location on low-lying alluvial plains and large rainfall events, which result in annual flooding. Furthermore, the Pearl River itself is tidally influenced and therefore any sea level rise will amplify the impact of flooding. The Baietan Plan proposes a suite of comprehensive strategies that includes raising land for key redevelopment areas, establishing stepped wetland levees and providing an interconnected network of canals, waterways and floodable green spaces that will protect the planned population of over 740,000 residents. In addition to protecting future generations from flooding, the Baietan Urban Design Master Plan project creates an integrated network of more than 1300 hectares of green space, and remediates over 300 hectares of polluted former industrial land while providing over 30 million square meters of transit-oriented development within diverse and unique urban neighbourhoods.
What is subtropical urbanism?

Every town and city faces the challenges of urban consolidation and redevelopment which reconciles population growth and changing demographics with a wider number of housing forms. There is a constant search though the plan making process to find the appropriate types, locations and mix of denser forms of housing.

The new Brisbane City Plan is currently under some strain with a boom in apartment developments. Many are seemingly over developed, well above height limits within City Plan, creating a community backlash, including Kurilpa Point and the former ABC site, amongst others. A purely market driven approach is criticised for not providing accommodation for families and important community infrastructure, including additional schools and open spaces. Areas are just becoming more crowded with small rental apartments in tall buildings. Questions about what is the type of city we are now getting are being asked, loudly.

Brisbane and South East Queensland are known for a remarkable subtropical climate which inspires great design responses and this has become our 'brand'. But what is the form of density in a subtropical place that can respond to community needs and capture the imagination of the community as a desirable future? Are idiosyncratic tall towers with landscaped parks the best approach or are there ideas of subtropical urban blocks that can be developed?

This talk will describe a number of practical examples and conceptual tools drawn from research and practice over two decades that address these issues of what is a desirable subtropical urbanism. This will include research at the QUT from the Centre for Subtropical Design, the Yeerongpilly TOD master plan and QUT master student work directed by the author in his role as a professor of design at QUT.
Green Visions

Green infrastructure requires the same kind of protection, investment and innovation we afford more familiar types of built infrastructure.

Green infrastructure has an increasingly important role to play as we face the challenges of population and urban growth on the one hand and climate change on the other. Well designed and planned green infrastructure will help absorb flood water, cool the urban environment, clean the air, provide space for local food production and ensure the survival of Sydney’s fauna and flora as well as providing space for recreation, sport and leisure.

The Sydney Green Grid envisions green infrastructure as a three-dimensional envelope that surrounds, connects and infuses buildings, streets and utilities. The concept of landscape as green infrastructure provides a potent framework for integrating the work of designers, planners, developers, policy makers and others, and leveraging this collaboration to achieve larger metropolitan goals.

The Sydney Green Grid is a green infrastructure, design-led strategy that includes the full range of open spaces: national, regional and local parks; the harbour, ocean beaches, wetlands, rivers and creeks; playgrounds, playing fields, golf courses and cemeteries. Furthermore, interconnected linkages are fostered within the wider public realm through enhancing creek corridors, transport routes, suburban streets, footpaths and cycleways.

The Sydney Green Grid is therefore an open-space interconnecting network that will keep the city cool, encourage healthy lifestyles, enhance biodiversity and ensure ecological resilience.

This initiative is a key delivery action in the most recent Metropolitan Strategy "A Plan for Growing Sydney" and is a definitive plank in Sydney’s subregional planning framework.
Is 2.83279949568 Ha of open space/ 1000 people of any relevance to urban renewal

The discussion and debate around open space, parkland and recreation planning continues to be dominated and distorted by redundant and inappropriate normative standards that were developed from needs based assessments of recreational needs in the UK in the 1930s.

The paper will briefly outline the derivation of these standards, and how in the case of urban renewal they are redundant, to the extent that they are not achievable, and inappropriate to the extent that the ‘needs’ are very different.

By comparing the amount, distribution and quality of open space in a number of cities it will be show that new approaches are both possible and desirable.

The importance of the ‘quality’ of the open space, which is often overlooked in assessing the adequacy of open space provision will be illustrated by comparing open space provision in different parts of Sydney in relation to a number of performative measures (visual amenity, biophilia, air cleansing, active and passive recreation, habitat and ambient cooling amongst others).

The paper will then show how a re-conceptualisation, and changes to the governance of public and private spaces, streets, courtyards and rooftops may provide a richer and wider range of recreational opportunities in the high density urban renewal areas in and around Green Square in Sydney.

In conclusion the paper will posit some principles for a new approach to open space planning in higher density renewal areas, based on the preceding analysis and reconceptualization.
Dr Alpana Sivam  
Senior Lecturer, University of South Australia  

Co-Authors: Mr Matthew Ballard, University of South Australia, Dr Sadasivam Karuppannan, University of South Australia  

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**High Density Development: Community Attitudes & Urban Planning’s Response**  

Environmental and economic pressures have forced urban planning stakeholders to investigate and increase density in cities that have been generally low density in nature, including Adelaide. The 30-Year Plan for Greater Adelaide is the recent strategy plan that proposes higher densities in the current urban form. Empirical evidence suggests that many Adelaidians are adverse to having higher density development near them, let alone living in it.  

This research investigates the perceptions and preferences of the community towards higher density development in an Adelaide Context. The research also investigates senior urban stakeholders responses to these perceptions and preferences and what may be the way forward. To achieve these research aims, a triangulation method was used. A review and analysis of the literature, surveys and interviews were conducted in order to check and increase the validity of results.  

Result demonstrated that the preference is strong for lower-density and are adverse to higher density development. Results collected as part of this research found that 75-80% of participants in the surveys were against any increase of densities near where they live. Other results indicate that the community are wary of having development that is high in height and would prefer to see open space reduced in order to accommodate more low-rise development. This view did not appear to change depending on age, with younger age groups also not generally supportive of high-density development. Those who live in it merely see it as a “stop-gap” measure as they save to live in more traditional low density developments. This is due to the perceived benefits for families but also a underlying rejection of the push to higher densities.  

The responses by planning professionals to these perceptions and preferences, stressed the need for the community to be educated on higher density living and its positives attributes.
Mr Peter Skinner  
Principal, Peter Skinner Architect

**Overdue Subdivision of Land Permission**

Queensland’s Undue Subdivision of Land Prevention Act 1885 imposed a minimum residential allotment size of 16 perches (405m²) with a half-chain (10.05 m) frontage, effectively preventing construction of narrower attached town houses, leading to Brisbane’s low-density inner suburbs of detached cottages. The Act responded to house building ‘in such a crowded state as to be dangerous to health, especially in such a climate as that of Queensland’. Consideration of allotment size was focussed on establishing sufficient space for health, cleanliness and drainage; access to services at the rear of the property; the provision of ample space to grow a tree and to allow young people to ‘kick their heels about’.

130 years on, medical knowledge and sanitation have negated health concerns regarding closer living, but there has been little relaxation of minimum residential lot sizes in Brisbane. Housing affordability is a major contemporary concern, and this paper proposes a re-examination of minimum subdivision patterns in order to reduce the cost of a freehold house and garden.

Smaller allotments and leaner road reserves can increase the supply of house-lots in desirable neighbourhoods. The design of small housing allotments requires creative synthesis of innovative house-forms, access and parking requirements and environmental considerations. Small lot houses must be precisely oriented and shaped for summer shade and winter solar access and to maximise solar energy harvest and sunlight for productive gardens. Placement of on-site rainwater storage needs consideration, and the garden and street trees needed to mitigate rising urban heat effects need careful siting to provide shade and assist storm water management.

This paper argues that it is timely to permit and promote closer subdivision of land, and presents an innovative neighbourhood planning design that demonstrates a significant increase in urban density and affordability while satisfying traditional and contemporary expectations of amenity.
Ms Hannah Slater  
Architect, Architectus Brisbane

Urban Ageing: An Investigation into Opportunities for Ageing in Australia

Brisbane has an ageing population, attributable to; people living longer, the significant decrease in fertility and the maturing baby boomer generation. By 2040 Australia will require 4 times the amount of aged care accommodation and by 2050, the aged population will exceed the population of children. It is important the housing offer meets demands of the fast growing population ‘majority’ through the provision of high quality living and care environments that are well connected to the urban environment and associated infrastructure.

Increasing inner city land value is resulting in the replacement of facilities with new apartments. Consequently, aged care facilities are becoming isolated through their relocation to outer suburbs where land is cheaper.

This presents obstacles for the ageing population, disconnecting residents from established communities, families and access to vital services.

This in combination with the replication of out-dated models that amalgamate ageing citizens in large suburban often ‘gated’ facilities breeds negative stigma and rejection from the community due to the inappropriate scale, institutional demeanour and awkward relationships these buildings have with their surrounds. Further, aged care providers are currently disadvantaged in the marketplace with a staggering 40% of facilities running at a loss. Lack of financial incentives inhibit the upgrade of existing and deters investment in the construction of new facilities. This series of conditions set up a fraught urban model which requires drastic rethinking.

This paper critically evaluates the relationship between aged care and urban design in Brisbane, Australia and fundamentally challenges issues underpinning the current model which segregates, isolates and immobilises the aged population from their community and neighbourhood. Most importantly, the research looks forward, and questions how the current urban framework might be reshaped to provide more appropriately integrated aged care communities that offer a diversity of desirable living opportunities into the future.
To create architecture today is a gnomic game. The rules of the game are paradoxical, players are continually changing their minds and every operational process ends up being self-referential (1). The basic democratic rights pertaining to the built environment are: the right to natural light, the right to visual perception and the right to water. Therefore, the job of an architect nowadays is to find a new balance between ecology and urban planning. Our aim as thinkers and operators should be to once again play an active role in environmental quality optimization by acknowledging the complexity of this process and searching for sustainable changes.

BUSarchitektur has been working on issues affecting our contemporary society since it was founded in 1986. BOA office for advanced randomness has been developing cultural interactions since its establishment in 2003. Through their proposals both companies develop realistic utopias that help us to value and redefine our inherited legacy in a conscientious and committed way.

The new Campus WU project was launched in 2005 within the academic setting of the Vienna University of Economics and Business. The project culminated in 2013 with the handing over of the finished university complex within its budgetary framework of EUR 500 million. It is the largest University of Economics in the European Union with a population of 25,000 students, teachers and administrative staff and is moving into a neighborhood with approximately 100,000 inhabitants. This is where future generations of, hopefully competent, economists will be trained. It is a strategic example of a star system, employed by the user, which seeks to obtain the necessary funding by awarding the projects to Zaha Hadid Architects, Hamburg - CRABstudio, London - Carme Pinós, Barcelona - NO.mad Madrid, Hitoshi Abe - Sendai as well as to the Masterplan winner, Vienna’s BUSarchitektur.

The democratic organization of users, the power structures of the state, leading agencies’ inspections, monitoring costs and budgets, branding inflicted on architecture, multiple regulations, contract award mechanisms, the historical burden of a privileged place, the social tensions associated with one of the established centers of prostitution, the dissatisfaction of the student population, etc. – these are some of the factors causing stakeholder interests to be in permanent unstable equilibrium.

As a result, the Masterplan authors’ constant search for a holistic equilibrium continued throughout the entire project process and into the execution, with an unstable balance of power between users, residents, developers, politicians, experts and author design implementers. We will present the architect’s roles in three micro-worlds, which seek to put forward the idea that a sustainable balance between the four quadrants (2) is not a pre-existing element of our work as architects and urban planners.
Ultimately, striking the balance between personal achievement, objectifiable technology, cultural interaction and social urges, means recognizing the importance of permanently changing our point of view and encourages us to take other factors into consideration.

Every single detail should force us to recognize the many different ways a given intervention’s micro-action can be interpreted and to proceed accordingly. However, our open-minded approach to searching for added-value, which must necessarily incorporate our actions, often leads us to adopt casual strategies for managing projects. The imbalance between the four quadrants is the starting state that compels us to set off interrelated chain reactions in an attempt to awaken the potential for coOpetition (3).

This potential is present both in the direct actors and in the domino effect that will occur once we take control of the reality in which we act. CoOpeting public and private actors that acknowledge the simultaneous presence of both cooperation and competition when talking about quality of life and capital repayment. Competing cooperatively in order to successfully invent and develop alternative design mechanisms to those of globalization.

Intellectual curiosity as a journey to discover not-so-obvious game theory applications in architecture – this is our way to play an active role in our daily productive output. The game played is a game of society since it leads to the socialization of the individual in a virtual community and, as a consequence, to the development of a real community. The only way for Campus to have a future is if we activate the urban potential of the educational habitat.
Urban Farming in the CBD

Liveable cities are those that are healthy and sustainable. This presentation shares the opportunities and challenges of a five year transformation of an ordinary suburban block of rental units in inner-city Brisbane into a productive urban farm, and the affect it has had on the surrounding community – including an increased financial return for the landlord.

Urban agriculture has sat on large blocks of land at the fringes of the city, however the Spur family have pioneered novel ways to produce the majority of their family’s food needs, such as, organic fruit, vegetables, seeds, grains, eggs, and honey – within the confines of a multi-unit inner-city rental property. They reached their goal to not only reduce their environmental impact but also to return to a home-based, family-centered and self-sufficient way of living whilst simultaneously activating, inspiring and empowering the local community.

In this talk, Roman tells the story of SpurTopia, his urban farm that has strengthened the community and built resilience in the city – having quickly rebounded after two extreme climatic events. His urban farm was developed following a repeatable staged process building towards a holistic and integrated outcome. It has involved:

1. 3 dimensional gardening on-top of a concrete base,
2. farming urban animals like chickens, honey bees and worms (whilst reducing insects in the surrounding community),
3. harvesting rainwater and grey water,
4. a $10 transportable solar oven (that replaces the conventional oven and operated unhindered right through recent power outages),
5. a home-made solar hot water system
6. following organic gardening principles to support food sovereignty, and
7. inspiring and empowering the local community by sharing and swapping produces and expertise.

SpurTopia, is readily repeatable – and even transportable, suiting the needs of both property owners and tenants. It is scalable, and can be adapted to suit a wide range of dwellings. In this session, Roman will share his family’s experience, knowledge and inventions with a view to stimulate a conversation with local governments, urban planners, designers and property developers.
Beyond the Podium: Urban Spaces for Tall Buildings in a Subtropical City

The tower and podium form is a widely accepted typology for urban intensification across the globe. However in the sub-tropics it may not be the ideal device for creating a sustainable urbanism, where architectural principles of porosity to light, air and breezes, and integration of landscape experience are favoured.

Brisbane City Council forecasts that in the next 20 years floor space demands will translate into 50 new tall buildings in our very compact city centre. Through a re-thinking of the podium form, these 50 new buildings could have a transformative impact on the urban spaces of our city. Learning from the very practical adaptations to climate and locale of the vernacular architecture, the paper proposes a series of typologies for urban spaces at the base of tall buildings that are well-adapted to our subtropical city, signposting a more ecologically oriented approach to creating 21st century cities.
The Role of Urban Reserves in the Portland, Oregon Metropolitan Region

Unique among American planning systems, Oregon has developed a comprehensive growth strategy. Rural areas are separated from urban areas by an urban growth boundary (UGB) concentrating most urban uses within the boundary and fostering policies to provide urban levels of facilities and services, as well as varying housing densities and intensities of industrial, employment, recreational and commercial uses.

The UGB encompasses existing and anticipated urban uses over a rolling 20-year period. Expansion of the UGB requires extensive study and public process and is frequently contested. Those expansions often center on the issue of whether adding land to the UGB might be avoided by requiring more intensive use in the existing UGB.

Planning beyond the 20-year timeframe includes “urban reserves,” i.e., those lands to be given first priority for UGB inclusions beyond the initial 20-year UGB horizon. Designating urban reserves is controversial, because it allows for inclusion of lands that are suitable for farm or forest use and would otherwise be assigned to a much lower priority for UGB additions. This is especially apparent in Washington County, a Portland suburb where intense demand for additional lands for the expanding electronics industry onto excellent adjacent farmland.

This presentation will discuss the practical issues involved in seeking to provide for both employment growth and preservation of an agricultural economy in the same region. The criteria for urban reserves are intentionally loosely drawn to provide policy makers with flexibility in determining both need and the precise lands to be designated for long-range urban use. The presentation will chronicle the eight-year experiment for use of this long range planning tool and conclude with some lessons learned from that experience.
Connected Places – The Case against Exclusivity

This presentation will discuss and introduce new methodologies aimed at analysing how people use places, why we need to connect places and buildings, and why exclusivity and disconnection results in poor urban outcomes. This will cover whole districts, as well as individual buildings. The presentation will show examples of projects where connecting people and places has been successful.

A major focus will be the recently awarded Darwin City Centre Master Plan. This plan was awarded the 2014 Award for Planning Excellence by the Victorian chapter of PIA, and a commendation award in the 2014 Australia Urban Design Awards. The Darwin City Centre Master Plan introduced new methods for accurately predicting future urban values which could then be used to deliver essential infrastructure in a context where funds for infrastructure have become limited. The Master Plan introduces new methodologies for the analysis and management of urban centres.
On the Waterfront: Transforming The Rivers Edge

Brisbane is a River City and, despite long periods of under investment, is actively reinvigorating its relationship with the River through a suite of interconnected strategies and projects that will forever transform how we use our waterfront.

Through our work on several major waterfront projects, we are in a privileged position to be able to envisage a new and expansive 'waters edge' that is the future focus of our city’s outdoor lifestyle, not a barrier to be crossed. We envisage its broad reaches as fields for recreation and its edges as precious spaces for all manner of recreation and celebration. Iconic ferry terminals, new developments, piers, marinas, festivals, pools, jetties, water taxis, recreational boating and all manner of other activity will bring our river back to life and restore its role as the life blood of Brisbane, its reason for being.

In this presentation we will explore the process and outcomes of the award winning Rivers Edge Strategy and then seek to unfold its story through an exploration of several major projects including Hamilton Northshore, Howard Smith Wharves, Kangaroo Point Bridge, Queens Wharf, The Botanic Gardens, the City Reach, and Kurilpa. These project snapshots will bring the intent of the strategy to life and lay the foundation for the next iteration of Brisbane as The River City.

In conclusion we will present the 9 key insights from our ongoing work that, from experience, are the critical success factors is delivering well integrated and relevant waterfront redevelopment.
A Discussion of “After” with Community: urban design practice in a high-density area

High-density areas in Tokyo, Japan have problems of narrow street patterns and segmentalized small plots with high land value and the risk of devastating earthquakes. The high risk of earthquakes pushes governments to promote urban reform projects such as street-widening projects.

This paper outlines the urban design process collaborating with a community, professionals, and government in Nakano ward, Tokyo, one of the densest residential areas in Japan. They have discussed how landowners can rebuild after street widening project from 6-meter to 14-meter wide, on a 500-meter-long shopping street.

The author has worked with the community for 10 years, and urban design solutions have been repeatedly proposed and discussed in the monthly community meeting. We found that urban planning restriction is the biggest obstacle for rebuilding such as sun shadow and road diagonal control coupled with use districts. Besides, some of the remaining plots after the project will be too small to be rebuilt and others will be rebuilt in a much smaller size because of the reduced plot size and planning regulations.

Therefore, we are now developing a “district plan” – one of the Japanese regulation systems, which is more localized, detailed rule that reflects the community’s features, and that started in 1980 – for easing regulations while protecting the environment so that landowners can rebuild almost the same size floor and secure the sustainability of livability and vibrancy along the shopping street even after the project. The paper outlines the discussion process of the district plan and considers the urban design solution with the district plan while comparing it with other cases in Tokyo.
Ms Tuesday Udell  
Senior Policy Advisor, Heart Foundation

We ♥ density done well: changing the conversation to focus on health

Community and media discussions about increasing residential density within the built environment professions, the community and the political arena rarely focus on the potentially positive health and wellbeing benefits. Yet examples from around Australia and the world show that when density is done well and underpins other built environment features, it can promote walking and cycling and reduce car dependency.

In this presentation we present a positive perspective of higher density. There are numerous Australian case studies which illustrate great neighbourhoods that support walking and cycling, while also supporting increased local amenities and social infrastructure. This presentation will draw from two new evidence-based reports from the Heart Foundation which challenge some of the assumptions that underpin community opposition to increased urban density.

We know higher density neighbourhoods are increasingly desirable, and offer an alternative style of housing for a range of population groups. Yet in Australia, urban land policies still struggle against the expectation that population growth will be addressed by building the traditional low-density suburban sprawl model of Australian suburbs. Evidence shows that this type of low density development is associated with less physical activity, increased car-dependence and higher rates of obesity among some populations.

The Heart Foundation supports the planning and development of urban environments that enable people to make healthy lifestyle choices and incorporate incidental physical activity into their day. We will argue that higher density neighbourhoods will underpin the creation of walkable neighbourhoods, and contribute to increasing physical activity levels for those who live there. In addition, we will explore the factors in the built environment that work together to enhance walkability.
"Pro-action". The role of new media in Idea driven City Making.

Social media and traditional media can cause Governments to fear and to fall. Grass root forces, fund raising campaigns and social media networks can erode the power of political parties and communities can engage with each other on an easier platform. Nicco Mele argues that’s it’s the “end of big” and our ability to stay connected--constantly, instantly, and globally--is dramatically changing our world leading to traditional institutions being disrupted in revolutionary ways. David Vago director of a boutique urban place making and landscape architecture practice has been pioneering these revolutionary ways through positive idea driven campaigns to enhance city making. David will prove that pro-active city making on a large scale can be effective through new media and the barriers between Government, people and corporations can be broken down through our constant need for connection, stimulation and information.

David will discuss three of his recent city making projects in Sydney where good ideas can be communicated through strong media engagement thus inspiring people while influencing change and policy. Ideas such as the “Highlane” Monorail walkway, Bondi Beach revitalization and the $20 billion dollar Garden Island urban renewal project were visions conceived within his small office attracting global media attention and the interest of the highest levels of Government. These were not tenders or projects created by Government or property development companies but the vision of an urban professional which could not have been possible before the new media revolution.
Universities and healthcare institutions provide the backbone for many cities, informing urban design and the lifestyle of citizens. This paper considers the recent developments and plans for Parramatta that are providing the building blocks for transformation. This requires strategies for long term transformation of whole precincts while connecting to the quickly emerging developments in the CBD.

University education and student life is changing. Today students produce their final assessments while juggling a thousand other things they need to do. They rush from work to home to a lecture - doing this without a car in Sydney is very difficult; in Western Sydney it is virtually impossible.

Connectivity and location have become all-important to universities. Campus planning and development approaches have also shifted significantly. In the 1990s and 2000s the thinking was around town and gown: should we build a town environment in the university campus? Should universities open campuses in town centres? There are now seven major universities present in the Sydney CBD (not counting the University of Technology, Sydney [UTS]). Newcastle University is about to start construction on its eight-storey building at Civic and the University of New England has a presence in a sandstone building on Church Street in Parramatta.

As universities redefine the way they operate, they distinctly shape their context. Recently, there has been a lot said about anchor institutions and about eds and meds (education and healthcare) as valuable cluster-creating forces. Parramatta is in a position of having both: the internationally significant health precinct at Westmead to the west, University of Western Sydney (UWS) in Rydalmere lies to the east. However the physical links to these are awkward, Parramatta parklands separate the CBD from Westmead and the eastward connection is only along the heavy traffic corridor of Victoria Road. This missing east-west link explains why the light rail link is such an important priority.

Sydney has long struggled to establish a really convincing secondary node. The land-value contours are distinctly concentric around Sydney and the transport corridors have always taken a strong single asterisk formation. For decades transport planning has made much of the geographic centrality of Parramatta and planned its nodal role, however during the previous state government term the only major transport corridors (northwest and southwest heavy rail) reinforced Sydney's primacy.
UWS might be the most strategic anchor institution in Sydney. It covers a territory more extensive than all of Sydney’s other university campuses combined. It is a characteristic of anchor institutions that their direct impact through land holding, large capacity for employment and cluster for economic development tend to make them spatially fixed. UWS is situated at the key nodes identified in the metropolitan strategy A Plan for Growing Sydney. Besides Parramatta, its new Werrington Corporate Park at the Penrith campus sits at the intersection of the north-south and east-west corridors. The Hawkesbury and Campbelltown campuses anchor the north-west and south-west corners of the Plan.

This paper explores how a long-lived anchor institution is quickly responding to and driving opportunities while influencing slow-moving patterns of city growth.
Mr Rick Walters
Technical Director, Infrastructure Sustainability Council of Australia (ISCA)

Infrastructure Sustainability

Infrastructure sustainability – reducing risks and improving social, environmental and economic outcomes through the facilitation and development of industry led performance based integrated triple-bottom-line governance and reporting frameworks, decision tools and rating tools; generating communities of practise throughout the lifecycle from funding, planning, procurement, design and delivery to operations and maintenance.

About ISCA: The Infrastructure Sustainability Council of Australia (ISCA) is a member-based not-for-profit public and private industry council. ISCA is the peak industry body for advancing sustainability outcomes in infrastructure. The means by which ISCA is advancing sustainability outcomes in infrastructure is through the development and facilitation of the IS rating scheme. IS rating scheme is an industry-compiled voluntary sustainability performance rating scheme evaluating planning, design, construction and operation of all infrastructure asset classes in all sectors linking industry, communities and commerce beyond regulatory standards.
The devastating 2010-2011 earthquakes in Christchurch, New Zealand caused major damage in the city centre and the eastern suburbs and left many urban sites empty. Since 2010, temporary uses have emerged on vacant post-earthquake sites including community gardens, urban agriculture, art installations, event venues, eateries and cafés, and pocket parks. Temporary uses of vacant urban sites are, however, usually not foreseen in conventional urban planning and have typically be considered as a sign of urban disorder.

The paper discusses the creation and use of transitional community-initiated open spaces (CIOS) in Christchurch’s central city and the potential benefits they offer. The paper examines data based on three separate studies that used different research methods including literature reviews, site analyses, key informant interviews and observation studies. Through the analysis and synthesis of different research perspectives on temporary urbanism in post-disaster Christchurch, the paper encourages a holistic discussion on Christchurch’s bottom-up approaches to urban design in contrast to the official top-down central government-led rebuild programme.

The paper raises the question if CIOS are ‘only’ temporary phenomena that cease to exist as soon as ‘regular’ urban development picks up again, or if they could become incubators for alternative and possibly more sustainable urban design processes.
Mr Alex Williams  
Team Leader - Policy, North Sydney Council

Ecologically Sustainable Development via the planning and assessment system

The Ecologically Sustainable Development (ESD) Best Practice Project is a ground breaking project which has seen a comprehensive green audit test the effectiveness of Council’s own planning provisions and processes. The presentation will outline how North Sydney Council has used the planning and assessment system - the very means by which Local Government can affect the long term structure and performance of the built environment - to achieve best practice sustainability performance.

Beyond project methodology the presentation will focus on significant initiatives resulting from the project including:

- Australia’s first green roof policy - introduced as a stormwater management initiative helping to reduce the impact of urban runoff on Sydney Harbour;

- Energy and water provisions - now linked to the scale of development with new and ambitious ‘best practice’ performance requirements in place for large scale energy and water users;

- A new bushland buffer zone - established to protect North Sydney’s biodiversity which has been demonstrated to exist primarily within Council’s bushland reserve system which is highly susceptible to ‘edge effects’;

- A tranche of transport related planning provisions - are resulting in significant reductions in car use in areas close to local centres and public transport.

This project is a significant piece of work because it uniquely:

- Provides an in-depth and detailed green audit of Council’s planning provisions;
- Benchmarks best practice across a range of local jurisdictions, both in Australia and overseas;
- Adopts a targeted approach to the application of sustainability provisions thus ensuring efficient regulation;
- Provides a road map, through a detailed implementation plan, that will actively ensure the achievement of best practice;
- Can be used by other councils to assist in their drive towards sustainability, making the project significant on a regional and state-wide scale.
The Importance of Providing Open Spaces to Improve Health Society in Residential Neighbourhoods,

Riyadh city, Saudi Arabia

The distribution of public services throughout the Riyadh city has long proved one of the largest determents to the region, especially when it comes to open, public spaces. Due to urban expansion, many open spaces are constructed over in order to make way for the increase in population and growth. However, this has led to an increase in health problems due to the lack of public open areas and the ability to easily exercise, walk and move about the area. Due to this, the need to establish open areas for walking, playing and simple outdoor enjoyment proves more important now than ever and should become a founding aspect of urban design throughout the city, in order to help with medical issues such as blood pressure, diabetes and obesity.

Thus, this research will indicate the importance of providing open spaces to improve health society in residential neighborhoods in Riyadh city in Saudi Arabia. Chronic diseases such as diabetes mellitus, obesity and high blood pressure have all become significant contributors to poor health in kingdom of Saudi Arabia. According to a recent study that 23 percent of the individuals in Saudi Arabia have diabetes. With a reduction of open spaces in the communities and further expansion, the situation is to worsen, if no alteration is made. the country spends $6 billion every year in medical expenses revolving around these issues.

Thus, the creation of open areas, the installation of sidewalks and greenways have become an appealing necessity so as parks and open areas be available to all of a city’s residents. In this research, the researcher has tried to point out that time has come for Saudi Arabia to create parks and open areas in and around cities in the belief that all people should enjoy convenient access to a nearby park or playground.

As a case study, the researcher has chosen Salam park in the heart of the city which represents one of the natural elements for Riyadh City, and Al Douh Park which lies at Towaiq Quarter in Western Riyadh that attracted residents of the neighbourhood. In the term of study that the researcher considering to presented the functionality, design and relationship open area and health
throughout literature review, case studies and discussion. the Saharan climate in Saudi Arabia, the creation of open spaces and parks shall not be the same as the ones in other different climate countries. Therefore, Urban planners must work to promote a positive way of life, such as local mobility and activities, through the installation of sidewalks and greenways, where individuals can spend time outside, instead of constantly in their home or driving to and from destinations.
A place for art: curating place identity in China

China’s identity has become synonymous with hyper-urbanisation, mega-city expansion and monumental economic growth. As whole precincts are wiped clean of the traditional past in a tabula rasa exercise to modernize, development seeks to extract a new marketable identity. In this highly competitive economic environment, public art is commissioned as a place making device to reinstall an authentic place identity.

However, with monumentality as the dominant aesthetic in contemporary Chinese development, how do artists negotiate the client’s expectation of scale with the exploration of identity in their conceptual practice? The multiplicity of expectations of the public artist will be explored through the lens of the procurement strategy used to engage artwork in new urban contexts. The recent public art by two prominent Chinese artists, Lindy Lee and Sui Jianguo, will be presented analysing the process of the public art strategy and the outcomes against the clients brief.

How does the deep self-reflection of Lee’s Chinese roots that explores the philosophies of Taoism and Buddhism, and Jianguo’s art practice that comments on China’s export culture and negotiation of an individual identity manifest in these public art commissions? How does Lee’s personal investigations into the issues of authenticity via concepts of the copy, and Jianguo’s monumental socio-political sculptural works of Chairman Mao’s communist jacket respond to the requirements of clients? The public art strategy will be argued as a critical tool in the success of curating public art that contributes to both a place for art and place identity.
Miss Cherifa Assal  
Master Student, Tokyo Institute of Technology

**Our cities, going through changes**

When we hear about the combo, big data and city we think about sci-fi movies. And it leads us to think that it is frustrating to think of the whereabouts of our city. Is it going to be like in the movies or is it going to be just an improvement of our lives?

The impacts that big data is going to have in our city could be placed in two categories; a positive one and a negative one.

Positive changes will result on making our life easier such as a better equipped healthcare centres, a better transportation service, a better management of a daily life matters and a better communication service.

However, something will remain essential to our life. Humanity. By following these revolutionary technologies, we should keep in mind that these changes are made for humans and not robots.

Whilst attending a workshop on Network Digital Revolution, some examples have been quoted; some of them were not related to architecture although what is important to know is that big data is happening. How to make this change a smooth transition will depend on architects.

With all the environmental problems occurring and low birth rates it is important to focus on solving the issue. As a fact, architects unfortunately tend to think about designing a project for not a larger time span and thus, instead of thinking about how a building could be multi-functional, the option would be to destroy and build again.

What should be done in my opinion is to re-use our existing buildings such as schools that are not operating anymore, and help to improve its system in a way that there is no big apparent change to avoid a big gap between what exists and what is coming, or being added.
Mr George Bramis  
Executive Manager Shaping Waverley, Waverley Council

Campbell Parade Bondi Beach - An Exercise in Urban Design Practice

Campbell Parade Bondi Beach is a major attractor and tourist destination. The footpath is also a popular location for outdoor dining, however over time the public spaces have led to this famous street being described as "shambles parade" due to the poor quality of the footpath restaurant spaces. The objective is to deliver a world class public domain and outdoor dining experience.

The proposal is to collaborate with the owners of a major redevelopment site known as Bondi Pacific (formerly Swiss Grand Hotel) in order to prepare and propose a new outdoor dining and public domain plan. The footpath in front of the Bondi Pacific (which takes up a complete block) will be used as a "pilot project" to test the new design including canopy structures, furniture, public art, street lighting, landscaping etc as a model for the rest of Campbell Parade.

Once the pilot project is constructed, plans for the rest of Campbell Parade will be exhibited as part of a community engagement plan in order to seek feedback and resolve outstanding issues before making recommendations for new concept designs to be adopted.

Bondi Beach is the most visited beach in Australia and one of the top 3 tourist destinations in Sydney behind the Opera House and Harbour Bridge. Ensuring that Bondi Beach reflects its pre-eminent location as a major tourist and visitor destination is important for business and the tourist industry and has implications for a range of urban design initiatives in the adjoining Bondi Park, which is listed on the Register of the National Estate, as well as the residential areas which adjoin Campbell Parade. How this special place integrates with these very different environments will be a test. Construction of the Pilot Project is scheduled for completion in September/October 2015.
Phronetic Urban Design

Phronesis is the Aristotelian virtue of practical wisdom and is concerned with practical knowledge. It is particularly suited to an ethical consideration of the most appropriate egalitarian urban design solution for the design and governance of place. This is because it is context sensitive and can relate to the particular values of place and the multiple dimensions of the utilisation and influence of power in society. Phronetic urban design and planning seeks to both understand and facilitate the best outcomes for all.
The Acoustic Environment and Road Planning in Chinese cities

Chinese cities have been developing rapidly, with the amount of road construction and cars continuing apace. By the end of 2009, the total length of road in China reached 3861 thousand miles, the second longest in the world. And up to 2010, China had 78.02 million civilian cars. Urban road traffic noise pollution arises, accounting for more than 40 percent of the urban noise pollution, which not only affects people's conversations and work, but also has become a threat to human health. Thoughtless urban planning and the lack of regulations and policies are two of the main reasons.

Based on the analysis of the current situation of acoustic environment, the deficiencies in the planning of urban roads are pointed out, and some practical measures in planning and construction are put forward to improve it.
Professor Steven Clarke  
Director, UNLV Downtown Design Center, University of Nevada Las Vegas

**The Historic Westside Las Vegas and the Collaborative Community Planning Process**

The Westside plays a pivotal and unique role in the African American community of Las Vegas. In the mid 1950s, the neighborhood culture and economy was thriving as illustrated by the Moulin Rouge, the first racially integrated resort casino in Las Vegas. Some 50 years later, the Westside still breathes a rich community despite economic and urban challenges. Building inclusive multicultural cities is a complex process requiring a diverse team of stakeholders and designers. The aim of this paper is to present the process employed by the University of Nevada Las Vegas Downtown Design Center (UNLV DDC) for establishing the HUNDRED Plan (neighborhood plan) for the Historic Westside neighborhood in Las Vegas.

A key component of the design process was a three-day collaborative design charrette established to listen to the community’s vision and aspirations for the neighborhood. Through this event, three concept plans were developed and presented to the community at its conclusion by a team of UNLV faculty and students, and local and international consultants. Subsequent workshops with the community were used to further refine the concepts and establish a preferred plan.

The UNLV DDC completed the neighborhood plan by establishing an action plan for implementation. The collaborative design charrette and subsequent workshops were essential in establishing a coordinated plan that is supported by the community. Presented within the HUNDRED Plan is an implementation plan with a strong vision, creative ideas envisioned with practical projects, and improvement program ideas that address appropriate regulation & zoning.
The usage and spatialization of urban big data

With the characteristic of being produced in great amounts, multi-source, fast-update, spatial-temporal data, which differs big data greatly from small data, will make big data an evolutionary tool in the collection of information, the measures of analyzing and the methods of research on the time and space behavior of urban cities.

On the basis of the existing problems in traditional research methods and managing to deal with the methods which will take a big role in the evolution of data acquisition and processing, this article puts forward the idea of spatializing urban big data as a very effective way of putting urban big data into use in urban planning. Besides, this article concludes the types of big data, comes up with two basic techniques of spatializing it, and several methods of putting the spatialized urban big data into use.

First is the visualization of urban big data. Second is the analysis of the spatial data in many ways, which includes the analysis of its characteristic, the pattern, the space relationship and origin, trends in the future, the way to predict the trends and the evaluation methods etc. Third is the integration of the spatial data. Forth but not last is the way to query on urban big data.

Key words: Big Data, Urban Planning, Spatialization
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**Review of Green City Construction in China**

In 2012, the 18th Communist Party Congress put forward that the Beautiful China should be the target of China’s eco-civilization in future. Soon afterwards, the Central Economic Working Conference further defined that China should construct cities and towns that are intensive, intelligent, green and low-carbon.

As the important link of eco-civilization of urbanization, green city has attracted much attention. Existing references failed to describe China’s situations of green city construction in English. At present, China has approved 17 national-level green ecological cities. Some provinces and municipalities have also followed this trend. For instance, Shandong Province has approved 17 provincial-level green ecological urban districts. Incentive policies have been put forward by both central and local governments. Relevant construction laws are to be established and improved.

Combined with a case of green city in China, this paper analyzed characteristics and shortcomings of Chinese green city construction. The article proposed that scholars should study relevant standards continuously, while policy-makers should take good use of green city’s commercial value.
Mr Chuannan He
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Authenticity Concept in Chinese Urban Preservation

Authenticity has been a core issue of heritage conservation and tourism management. The interpretation of authenticity can affect the method of preservation or even the method of construction.

In this paper, the author sorts out the concepts relating to authentication and arranges them both chronologically and logically. The relational concepts are: staged authenticity, constructed authenticity, and existential authenticity. By clarifying and juxtaposing these concepts, the meaning of “authenticity” can be learned in full and clear recognition.

This research gives a relatively clear platform to discuss and apply the word “authenticity”. It also prevents confusion when using the different meaning of authenticity. Chinese preservation examples are given to interpret and discuss the concept of authenticity.
The Design of Urban Water Landscapes: Comparing Projects for the Avon River (Christchurch, New Zealand) and the Jinan Moat (China)

Urban water landscape is a vital important element in taking shape of distinctive local living environment. John A. Wiens (2002) says that water is a much more effective agent in linking landscape elements, both in space and in scale. Furthermore, R. Aspinall, in Journal of Environment Management (2000), indicates that water catchments are functional geographical areas that integrate a variety of environmental processes and human impacts on landscapes.

Among the urban water landscape projects that have been recently developed, two have attracted our interests because of their emphasis on ecological design. One concerns the shores of the Avon River in Christchurch (New Zealand), organically dating from last ice age and redesigned thoroughly after earthquake in 2011. The other concerns Jinan moat, Luo River, the only river full of underground spring water in China, which was artificially constructed with the intention to defend invaders in Han dynasty and was top-down redesigned in 2007 and 2010 respectively. Although these urban rivers have different historical formation, their design strategies share some similarities – strongly focusing on keeping and exhibiting local features, and caring relations between residents and river, and also connecting local urban development planning prior to later second redevelopment.

Based on Ian Mcharg’s theory of Design With Nature and Mohsen Mostafavi’s Ecological Urbanism, the aim of this paper is to present and compare the urban water landscapes on these different sites in order to document the design methods and strategies in keeping local natural and cultural features. By using cartographic records, photographic surveys, designers and local residents’ interviews and field observation, we aim to reveal the possible optimized solutions in preserving and enriching urban water landscape features that these projects have developed and hence unveil their process to new visions for urban life in today’s city.
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**Does urban form matter on air quality in Korea?**

Although air quality is affected by the interactions between emission sources and urban planning factors such as land use, built environment, development pattern, transportation, few empirical studies have been conducted to identify the influence of urban form characteristics on air quality in Korea.

The purpose of this research is to examine the relationship between urban form and air pollution focusing on ozone in Korea. The characteristics of urban form include density, dispersion, centrality and land use mix which were measured by population density, Moran’s I index, entropy index, and land use mix index using statistical method and geographic information system (GIS). We found that the degrees of urban land use mix and compactness of urban form are significantly associated with high air quality through both the ordinary least square (OLS) regression and geographically weighted regression (GWR) models.

In addition, while communities with higher daily temperature, larger amount of cars and pollution induced facilities showed poor air quality, communities with larger percentage of residential land use tended to have lower ozone pollution. The findings suggest that mixed-land use and compact urban form needs more considerations as a critical concept of sustainable urban planning due to implications for air quality.
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A Heat Wave Vulnerability Analysis of Urban areas for improving Climate Change Resilience

Recent heat wave event in South Korea has induced 653 cases of heat-related illnesses (7 deaths), an increase over the previous year, 561 cases (1 death). The 2015 heat wave is still causing damage.

However, while it is not possible to eliminate completely the possibility of the occurrence of natural disasters such as heat wave, it is necessary to minimize its damage or enhance the idea of climate change resilience, meaning a rapid return to normal daily life after a disaster.

In this study, by utilizing AWS (Automatic Weather Stations) data of Korea Meteorological Administration and Climate Change Disaster Vulnerability Index, we analyzed the heat wave vulnerability of urban areas, and sought alternatives for improving climate change resilience.

In the analysis results, a spatial index with high heat wave vulnerability was presented in urbanized areas and the population aged 50~59 or over 65.

To enhance climate change resilience can be achieved by supplying green space in parking lots and buildings and providing heat relief shelters in the vicinity of roads and workplace as well as by developing alternative materials to block the radiant heat in asphalt driveways and concrete. In the end, the heat wave vulnerability is graded according to the level of risk (I-?) to provide systematic and suitable thermal environment design and management plans in accordance with the grades, including land-use planning, urban infrastructure, Building installation, and policy systems.
Design Research on the Ecological Skin of Urban Residence

The changes in the environment bring a series of risks and challenges to urban construction and development, and the living environment and sustainable development has become the focus of attention all over the world. Ideas of environmental protection are deeply rooted among people, and it is realized that the ecological building materials have considerable importance on environmental protection, resource conservation, energy savings and even human health. All kinds of new ecological building materials are increasingly in architects’ good graces. Moreover, residential environment plays an important part in urban environment and residential building is the largest building type and has the closest relationship with human life. Therefore, “the design on ecological skin of residence” is proposed, an innovative design method that blends residential building, basic facilities and green landscape.

This paper studies the design of ecological skin on ecological energy-saving residences for practical application and explores the inner relations among ecological building materials, residential skin and environmental resources to formulate strategies: the use of recyclable skin materials and local materials, active adaptation and adjustment to the changeable environment, the application of double-skin elevation system, the integrated design of solar energy technology and ecological skin. Hopefully, this paper will contribute to the establishment of eco-city.
Construction of a sustainable resource recycling system for building energy zero eco-villages

Recently in Korea, because of fossil fuel depletion and the risks associated with nuclear power plant management, active research has been conducted in the field of renewable energy to replace the existing energy demand from residential complexes. Having previously focused on the development of individual element technologies, the research makes the move to residential complex composition and demonstration by utilizing previously developed zero energy technologies. Recently, Suwon city is promoting a demo complex with ecological exterior spaces and energy zero buildings. The demo complex is intended to achieve maximum energy saving in residential buildings and acquire energy sources required for residential complexes through solar energy. Also, technologies for minimizing discharged waste are applied to the ecological exterior spaces of the complex designed to seek the benefits of rural living while living in urban areas. However, since there is a potential for ecological conflicts with applied technologies for energy zero and waste management in the ecological exterior spaces, achievement of the goal requires appropriate technology placement and ecological exterior space planning.

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**Designing along Melbourne’s Urban Growth Boundary: Planning Regulation as Place**

Urban growth boundaries are used locally and internationally to help manage land use and the planned urban expansion of a city. Since 2002, Melbourne’s Urban Growth Boundary (UGB) has undergone several significant amendments adding over 55 000 Ha of land. In light of current concerns around the sustainability, ecological impact of low-density greenfields developments, the continuing expansion of the UGB appears problematic, yet seemingly difficult to avoid.

This paper contends that we must design for an urban limit to a city not just plan for it, and that it is not just where locate an urban limit but how we create it that will reinforce its intent. Reading the UGB as a site creates the necessary precondition for design to investigate the potential of site-specific strategies to create or envision an urban limit. In doing so, the urban limit is imagined as a threshold situated between urban and non-urban land and, therefore, providing a connective place between the two.

The research presented investigates a section of Melbourne’s UGB to the north of the city as a site for design speculation. Various steps of the project respond to a number of landscape and urban scales, proposing alternative ways in which urban design strategies could express the location and intent of the UGB. The final proposition considers an integrated response of architectural, urban and landscape gestures that aim to create an urban-edge community fostering meaningful connections with the UGB as a place.
Form and process relationships: Initial stages of a typology of development processes

The findings from two case studies of waterfront redevelopments in Wellington, New Zealand and Halifax, Canada show the governance of the design and development processes influenced the built form directly through the values that drove decision making and, occasionally, via the social structures used to identify and prioritize those values. For example, having a high degree of central control was related to greater overall consistency of form and character, but also less physical detail in the resulting form.

Comparison of the governance-built form relationship in these two case studies suggests there are recurring built form patterns that are characteristic of specific governance approaches.

This paper will summarize the findings from the two case studies to demonstrate how the governance structure of the design and development processes influenced the built form outcomes. It will then outline a research direction for investigating a typology of this relationship using additional case studies of a range of development projects. Such a typology is intended to be a tool for stakeholders and practitioners to understand how different urban design and development processes that might be appropriate for different situations.

This research direction, therefore, responds to a gap in understanding of the relationship between the form of the built environment and the associated social and political mechanisms used to create and manage it.
When a sign is more than just a sign: multiple views of business signage in Aotearoa / New Zealand

In 2012 a survey of the business signage of 43 cities and towns in the North Island of Aotearoa / New Zealand was conducted and, in 2015, a further 10 communities were surveyed in the South Island. In each community, the form, location and design of a representative sample of business signs were photographically documented and later analysed.

This paper presents these findings and contextualises them in relation to the varied responses people have to business signage. These responses include: their commercial value, signage as a traffic hazard, concerns about 'visual clutter' and the nostalgia associated with old signage. It is through this process of classification and reclassification that we come to understand that a sign is always much more than just a sign.
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When co-location is not enough: designing walkable hospital knowledge precincts

As governments increasingly seek to anchor the development of cities in knowledge and innovation, attention has begun to focus on tertiary hospital precincts to deliver economic dividends. These precincts are unique because they provide both economic activity and fundamental public health infrastructure. A city can thrive without a tech sector or a major sports precinct, but it can't without a hospital.

Organisational silos hinder knowledge transfer and, ultimately, innovation in organisations. This problem is exacerbated in hospital knowledge precincts that seek to co-locate clinical, education and research services, where success depends on synergies beyond institutional boundaries. High quality public spaces and pedestrian networks encourage people to walk around and beyond these sites, enabling valuable connections to be made between institutions and individuals that can lead to collaboration and innovation. They also provide street level foot traffic valuable to small businesses and community activity.

This study examined the role of pedestrians in hospital precincts by comparing the size of the precincts, their proximity to everyday services, and the intersection density of footpaths. The project included interviews with city, hospital and university administrators in Houston, Boston, Toronto, Manchester, Stockholm, Paris, Melbourne and the Gold Coast.

Results suggest that the larger the precinct the more difficult it is to achieve good walkability, not only because distances between institutions increase, but equally importantly, because diversity of land use and general activity decreases. The discernible trend toward co-location of education, research and clinical services is profoundly changing hospital precinct form and function. As buildings get bigger and taller, and collaboration is increasingly internalised, public space and walkability is often diminished to the detriment of the institutions as well as the surrounding community.
A Conceptual Framework for Sustainable Food Waste Management for Building Eco-friendly Housing Complexes

Efficient energy consumption and resource recycling are essential to construct an eco-friendly housing complex. In particular, food waste recycling is an important entry point for environmental conservation, improved living environment, and resource recycling within a complex.

Food waste is processed and managed through a volume-rate garbage disposal system in Korea, and food grinders in the United States and some European countries and Japan. In recent years, the Ministry of Environment and the city of Seoul in Korea seek to strengthen the food waste management by conducting a pilot project mainly with the approved products for use of food grinders, and proceeding with related legal revisions.

In this study we present a new food waste treatment method with a different approach than existing food waste treatments for constructing an eco-friendly housing complex.

The ultimate goal of this study is to create an eco-friendly living environment. Achievement of the goal requires sustainable resource recycling systems which can reduce the cost of conventional food waste treatment methods, and promote waste to energy conversion within a complex.

The food waste treatment system proposed comprises specific procedures for food waste handling, including:

1. Household food waste is ground by a food grinder and moved through a pipe.
2. Household food waste moved through a pipe is separated into water and solids by a solid-liquid separator.
3. Food waste is put into a dryer through an injection device to be dried out.
4. Dried byproducts are processed to be used as an energy source for public facilities in a complex.

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The 90-10 rule: subdivision as a key concern for resilience and diversity in urban renewal areas

Many statutory plans have provisions and incentives to encourage site amalgamations in the form of density or height bonuses or both. This is usually on the basis that development and designs can be more ‘efficient’ on larger sites. This rationale is primarily driven by two factors: the built form that results from standardised setbacks, and the dimensions and manoeuvring geometry of cars.

Scant regard is given to the final or ‘legacy’ subdivision pattern, even though the desirability of ‘fine grain’ and ‘diversity’ may be recognised in supporting planning and design guidelines.

The paper will build on the research of Dovey and Rode, and their exploration of resilience in relation to urban morphology and urban structure.

The paper will use analysis of various subdivision patterns in existing suburbs in the city of Sydney and compare these to recent renewal areas within the city and other parts of the metropolitan area (Macquarie Park, Chatswood) to argue for the importance and achievability of diversity in higher density areas.

The paper will conclude with suggestion for a new rule that may be applied to urban renewal areas; that is, that there should be a legacy subdivision pattern that combines, and juxtaposes large and small lots once development has been completed. It will be shown that requiring 10% of the gross floor area to be in the form of low rise (2-4 storey) building on small lots could significantly increase the ‘resilience’ and both real and perceived diversity of the development at street level; hence the “90/10 rule” of the title.

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A/Prof Roderick Simpson  
Director, Urban Design+ Urbanism Programs, University of Sydney

Transformational infrastructure:  
remaking the city and questioning current practice

Sydney is about to commence $50 billion of transport infrastructure investment – ranging from motorways and metros to light rail, airports and intermodal terminals – in response to current capacity and congestion concerns. However, there is no evidence that these projects have been properly integrated or will make Sydney a better city.
Construction strategies under the high density urban environment

With the further development of cities and the austerity of central plot, high density turns into the main form of urban spaces. The high strength to use the land and space on the one hand brings some benefits including the great improvement of the land utilization, resources efficiently share and so on. On the other hand, traffic jams, competition in resources, mental depression and other social issues can't be ignored.

Architects are unavoidable to face the problems of architecture design under the high density urban environment. This article focus on the solutions to solve or ease a series of problems caused by high density urban environment through the methods of building.

From the perspective of architects, this article discuss the architectural coping strategies in five aspects, respectively, 1) building space, 2) building functions, 3) building traffic, 4) green ecology, 5) clearance between buildings and city.

In the end, this article puts forward design methods such as reducing the residential density, reinforcing the transitional spaces (also we call it grey spaces), multiple the building functions, the integration of building traffic and urban transportation, three-dimensional green ecology and the fully use and reasonable design of the clearance.
New Multicultural Suburbs In Melbourne – Exploring The Role Of Government Policies In Planning & Urban Design

In a multicultural society like Australia, where diverse cultural groups coexist in our urban environment and pursue different objectives, planners and built-environment professionals play a multi-dimensional role of addressing these complex issues and managing them to facilitate their integration, anticipating and responding sensitively to the complex differences in views and standpoints of these diverse cultural groups.

Melbourne’s new suburbs have transformed immensely in the recent years with changing trends in migration. The statistics reveal that the demographic composition of new suburbs has a mix of culturally divergent communities. Point Cook which is a suburb located within the City of Wyndham, south-west of Melbourne CBD has been selected for the purpose of this study. City of Wyndham has focused on developing appropriate legislation and policies to provide access, services, support and respect within their Cultural Diversity Policy adopted since 2008. Wyndham Council’s vision articulated in the Quality Community Plan encourages individual and group interaction, a strong sense of community and a distinct local identity.

This paper explores some of the objectives and strategic directions as laid out in the Point Cook Concept Plan and how the residents of the built environment respond to their community, does it coincide or contradict with the Councils aspirations and visions. Can we assign a distinct local identity to Point Cook? Is there a cultural reflection in the neighborhood character or the built environment of Point Cook?

In a broader perspective, this paper explores whether government’s measures to foster multiculturalism can be observed in our urban physical environment. Also whether the Victorian planning policies have evolved in the past two decades to represent the changing demographic composition of our communities?
Urban and Architectural Design Factors for Natural Disaster Prevention in South Korea

As disaster occurrence increases due to the abnormal change of weather or climate changes according to the global warming worldwide, damage of not only human life but also property are rising day by day everywhere in the world, and in our country damage by natural disasters are also tend to be bigger and broader. To prepare for the natural disasters, this study searched for the improvement plans of the regional building system considering climate changes to cope with it.

The purpose of this study was to figure out some problems and seek an improvement plan for the actual condition and recognition of architecture disaster prevention plan at the design stage through a survey in South Korea. Under the influence of the recent climate change, natural disasters has been increasing every year, thus the economic losses and the human damage also increasing. We analyzed types of building damage and draw the influencing factors of the regional climate changes through the detailed analysis of building damage extent according to climate changes. As a result, It is determined that above all cooperation of related organization is necessary to use cause analysis information for urban planners and architects. Also it needs to be clearly presented countermeasure and improvement of design guidelines.

This research was supported by a grant 'A Study on Enhancing the Community Capacity for Hazard Mitigation in Climate Change' [MPSS-NH-2013-63] from the Natural Hazard Mitigation Research Group, Ministry of Public Safety and Security of Korea.
An Evaluation Model of Land Reclamation Scale Based on System Dynamics

In response to the following practical problems that the reclamation boundaries and reasonable scales have not been clearly identified in comprehensive management and control of land reclamation, a measurable method based on system dynamics models is introduced to determine boundaries and evaluate the total scale of land reclamation area in an objective way.

According to the basic principle of land co-ordination of supply and demand, the evaluation system of land reclamation scale, as well as its overall framework, causality analysis, hierarchy diagram, settings of process and operational equation, is constructed by two primary subsystems (the required and supply reclamation scale) and seven secondary subsystems (residential land demand, tourism and leisure land demand, industrial and warehousing land demand, port logistics land demand, available sea area, environmental capacity, infrastructure support level). Thus, a measurable simulation model of land reclamation scale based on the simulation software is established, covering 44 groups of formulas and 63 different types of variables which are 8 state variables, 8 rate variables, 28 auxiliary variables, and 19 constant variables.

What’s more, the land reclamation historical process of the Tianjin Binhai New Area in China from 2010 to 2013 has also tested its error level and proved its effectiveness of the model mentioned above. The application value of the model is summarized as well in the end of the paper.