Future-proofing our environments for an ageing population

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ABSTRACT
There is growing recognition that the ageing of Australia’s population will necessitate many urban policy and planning shifts. Creating age friendly environments is about future proofing our infrastructure. It is essential that it be done now to support the demographic changes presented by population ageing. A more sensitised and holistic planning approach will contribute to the mobility, participation, social inclusion and well being of people of all ages and abilities. Meeting the health needs of Australia’s ageing population requires an acknowledgement of the relationship between the physical environment and healthy ageing strategies. Age-friendly built environments provide us with great opportunities to address several health issues relevant to many older people. Accessible and welcoming environments encourage mobility, social interaction and inclusion.

Keywords: Ageing; Accessibility; Inclusion; Transport systems; Liveability; Urban Vision.

Introduction
Population ageing poses a number of challenges for urban planners. The number, location, health, disability (physical, sensory, cognitive) and age skew of the older population will impact on everything from seating design, the width of our footpaths, to the way we plan transport, roads, amenities, public spaces and housing. More and more people are ageing in place which means our local communities, cities, regions and towns need to accommodate the mobility of older people. Urban planners have an enormous opportunity to ‘future proof’ the built environment and contribute to prevention and early intervention so as to ensure the enablement and social inclusion of people of a range of abilities across the life course.

Future proofing describes a process that anticipates future developments, so that action can be taken proactively to minimize possible negative consequences, and to seize opportunities. It is also sometimes used to mean design of infrastructure that does not become outdated or outmoded in the near future. For instance, urban planning initiatives that fail to address population demographics, socio-cultural expectations or are based on developer lead innovation which may fail to provide access to common areas or public amenities in an equitable and thoughtful manner are those most likely to be outmoded in the future. This is important because, at some point in any human life the ability to move freely, see clearly and to be independent will change over time.

Physical aspects of the built environment encompass land use patterns, transport systems, public facilities; housing and design features of the built environment. Traditionally these have been addressed via urban planning. Two promising movements that on the surface
embrace improved walkability include ‘new urbanism’ that promotes walkable
eighbourhoods that contain a range of housing and job types and ‘New Pedestrianism’
which advocates walkable neighbourhoods (i.e. 400m radius/five minute walk). Both these
planning movements are a response intended to contain if not completely reverse the
perceived problems of modern cities. These problems include unsustainable infrastructure
costs resulting from urban sprawl land release; a desire to return to car-less traditional
forms; and the need to achieve low-carbon sustainable development targets. These have in
turn fed into strategies such as urban consolidation, and have resulted in higher density
more vertical developments.

While these newer urban planning movements have many pluses for older people,
sometimes they do not align well and conflicts result such as those posed by provision of a
shared-use path, multi-use path, or recreational pathways. For instance, pedestrians aged
60 plus years already represent 42% of all pedestrian fatalities within NSW\(^1\). Lack of senior
friendly design features, vehicle speed, physical frailty and slower responses time are all
indicated as important in fatal accident investigations. For instance, electric or e-bike use is
increasing and e-bikes can reach a speed of 32 kilometres per hour. Critically, other senior
friendly environmental interventions are either inadequately considered or are dismissed
because they are perceived as unnecessary or too expensive. For instance, while many
older adults do not perceive thermal comfort differently pathologies like cardio-vascular
disease and dementia alter thermoregulation and thus health; agitation and comfort
outcomes are different\(^2\).

The promotion of the Healthy Spaces and Places planning principles, which advocate well
located, well maintained local community infrastructure – bike paths, safe roads and climate-
proof buildings in which to house public services is one example of this. It is intended to be a
means of achieving many important social and health policy goals and it is clear that many
older adults would benefit from these initiatives. However, few new developments
consistently and adequately address population ageing adequately. Failure is both in
numbers and placements of required amenities. For instance, very few if any new
developments or significant retrofits adequately address way finding for cognitive impairment
or provide accessible seating every 50-100 m for those with cardio-vascular or arthritic
issues. Yet these are critical in enabling continued independence and autonomy in walking.

Local government authorities’ have the delegated responsibility of ensuring the suitability of
the built environment. This typically translates to physical access minima enshrined in
legislation. Over the past several decades most developed nations, including Australia, have
enacted a number of pieces of legislation to control and direct planning and infrastructure
outcomes. The new legislation covers energy production and consumption, water
conservation, disability discrimination and, finally, waste disposal and contamination. Anti-
discrimination legislation is an attempt to rectify the inequalities that are being experienced
by a number of people. In reality though this concept has not been achieved and despite the
existence of liability for environmental harm there are shortcomings. For instance, the
Disability Discrimination Act came in 1992 but there has been insufficient attention paid to
the needs of the ‘the user of buildings and the wider built environment outcomes have been

\(^1\) NRMA Response to the Parliament of NSW Staysafe Committee Inquiry Into Pedestrian Safety (2009). Available from
reduced to compliance with a minimum standard as called up by the Building Code of Australia. Unfortunately, older people and people with disabilities are often viewed as a homogenous group of wheelchair users, which disenfranchises many other functionally impaired groups whom have hidden disabilities like emphysema and arthritis.

Human functional and size variability is generally poorly understood and thus is understandably poorly covered in architectural theories and practices. The failure of our current physical infrastructure to accommodate older people appropriately can be attributed to them having been constructed to deal with a narrower range of variation than is in fact present in our older population. For instance, Australia has no design database to draw on of older Australians abilities and dimensions. Further, amenity inconsistent with economic objectives are omitted; relegated to the periphery; or only reluctantly provided and when provided are often inadequate to the actual needs. This is because, it is relatively easy to cost bricks and mortar but social benefits and cost substitutions such as health and care is still poorly understood.

The urban environment is also one which has been most impacted by the Global Financial crisis, both in terms of developer and construction industry cutbacks. Local government reducing rate base compounds this situation and municipal budgets are under pressure and financial contractions are projected to only get worse into the future, which is likely to have impacts on ability to maintain existing amenity let alone upgrade, or retrofit for improved amenity. However, where people live and the level of amenity that their built environment affords has an extremely important effect on the type and quality of the lives that they lead and on their life choices.

Demography of Ageing

It is still a truism that the only thing that humans can be sure of is death and taxes but one of the greatest achievements of the 20th century was an almost doubling of life expectancy. The substantial achievements in lower mortality rates combined with lower fertility rates has caused an evolution in the age structure of the human population. The number of persons aged 60 years or older in the world is estimated to be 605 million in 2000, and it is projected to grow to nearly 2 billion by 2050\(^3\). Already many European countries, as well as Japan, and Korea have almost a quarter of their populations in this age category.

By 2050, the older ages will make up over a third of the total population in the more developed regions. The size and speed of these shifts is unprecedented and therefore there can be little doubt that these changes in age distribution will have clearly foreseeable social and economic implications at both the societal and individual levels. For instance, the departure of older workers from the labour force is a source of serious pressure on national economies through its impact on pension schemes and has been estimated to cost the Australian economy more than 12 billion dollars in lost productivity. Thus a critical issue is the question of how greater urban planning sensitivity could respond in a timely fashion to these very significant demographic changes.

What urban design strategies are critical future-proof for ageing?

It is important to understand the diversity of the ageing population who may be working, travelling, volunteering, caring for a partner or relative, raising grandchildren and more often than not ageing in place. This and the fact that 77 per cent of 65 and over and 50 per cent of 80 and over are independent of the care system⁴, has huge implications for housing, transport, and public amenity. The physical and social security of familiar environments enables many older people them to carry on with everyday activities in this public realm, this is especially so for people with memory limitations such as in Dementia. Outside space can be therapeutic when it facilitates everyday social participation and frightening when it demands skills and abilities to navigate and utilize beyond the capacity of the older person⁵. For instance, shared pedestrian cycle ways are not just frightening but hazardous for the hard of hearing or the mobility impaired. The politics of speed and slowness and the emergent experiences of mobility and immobility that these relations impact require careful consideration within urban planning discourse.

Housing - The majority of older people want to age in place and most do not want to relocate to age-specific or care facilities. We know that diversity of accommodation options from dual occupancy through to manufactured homes need to be rethought. A step towards future proofing housing resulted when Commonwealth guidelines under the National Residential Affordability Scheme that committed more than $1 billion to stimulate the supply of up to 50,000 new affordable rental dwellings, included a requirement that most constructed dwellings adhere to universal design principles that facilitate better access for people with disability and older people. Universal housing design outcomes are important because the Victorian Council of Social Services (VCOSS) calculated that greater provision of increasing universal housing stock in Victoria could save the Victorian Government over $70 million each year solely on the basis of savings in home care, residential aged care and hospital costs based on the ageing population⁶.

The National release of the ‘Liveable Housing Design Guidelines’ in June of this year is another step towards future-proofing housing construction. The Liveable Housing Design Guidelines describe six key easy living elements that aim to make any home safer and more responsive to the changing needs of the home occupants over time. This new initiative is a industry agreed one that is currently unregulated, it aligns with social and affordable housing initiatives, where higher levels of performance can be made conditional on the receipt of government funding. With an ageing population, universal housing design features will enable ageing in place and visitability. However, more thought about how this will apply to non-standard housing types and how it will roll-out for existing housing will be critical. Only 2 per cent of housing infrastructure is new build so the lead times set out in the National Dialogue for Universal Housing Design’s Strategic Plan for the intended implementation plan mean that outcomes will be slow and may well not be in large enough numbers nor in the places where older people are seeking to remain. Further, home modification strategies and subdivisions to create more accommodation where it is needed most will remain a challenge for planners into the near future.

Transport – This includes pedestrian measures and transit systems. Pedestrian systems are of major concern for older people and providing a continuous, stable and level footpath with adequate seating and lighting is strongly correlated to better health and wellbeing outcomes. In order to access our transit system and navigate roads sufficient and appropriate pedestrian crossings are missing. There is also a lack of traffic islands and traffic lights that provide sufficient time for an older person to cross the road. The design of bus shelters and transport interchanges often materialise an organisation of space-time that favour the “quick” and the “spry”, and fail to adequately consider those who are not.

Adequate provision of and spatial accessibility within community and public transport modes like taxis, bus, train, ferry and the like are the primary determinant of transit use and only in the presence of such accessibility do other factors such as cost, comfort, security become important for older users. Transport that is universally designed allows all people to remain linked in with social networks, services and employment. Integrating reliable, safe and accessible public, private and community transport is essential to developing liveable and sustainable communities. The challenges in transport planning in metropolitan, regional, rural and remote areas including consideration of off peak shuttle buses, space for mobility scooters, pedestrian drop off points, and meeting accessible transport and safety standards.

Transport is the linchpin of holistic planning, an essential ingredient of social inclusion and an enabler connecting communities to housing, health, social activities and employment. This is acknowledged in the review of the inclusion of Disability Standards for Access to Public Transport in the Australian Government’s Disability Discrimination Act, which provides time frames for progressive improvement in accessibility of public transport conveyances, infrastructure and premises. Achieving pedestrian connectivity and pedestrian safety are critical for older people. Future walkability assessment must better consider how walking fits within an integrated transportation system and how accessible this system is for older people.

Public Spaces - Well-lit and maintained public spaces promote safety and opportunities for active lifestyles. However, on a daily basis, older people are faced with barriers, which effectively exclude them from participating as equal citizens. Many of these barriers relate to the accessibility of their built environment. Many public spaces are inaccessible without going up or down steps, there is insufficient seating, lighting, pedestrian and public amenity. This can make it difficult to get out an about - go shopping, visit friends or family, remain active and connected. The WHO Global Network of Age Friendly Cities has been advocating partnership in its age friendly environments work where initiatives are being implemented from big cities to shanty towns. Australia has been actively engaged in improving standards and introducing guidelines to encourage self-regulation around liveable, universal design, healthy spaces and active ageing.

The Disability (Access to Premises – Buildings) Standards by the Commonwealth Government announced in March 2010 recognize the importance of accessibility to a range of public buildings. The Premises Standards will commence operation on 1 May 2011, in line with the adoption of the Building Code of Australia in each State and Territory. This will allow

States and Territories time to adopt the Premises Standards within their building law frameworks. These standards will impact on public premises and the common spaces in multi-unit accommodation.

**How can we make future proofing happen more effectively?**

There is a shortage of small scale initiatives which impact on the day-to-day lives of older people and people with a disability. To rectify this gap a small pilot project lead by Local Government Association of NSW, The Physical Disability Council of NSW and COTA-NSW in partnership with the University of NSW is collecting visual examples of best practice within NSW at the local level. In particular, photographs may be used by councils to communicate with developers, engineers and planners and by the Associations to demonstrate liveability constructs. Planners and others involved in design need to understand the importance of future proofing for our ageing population and increase their focus on the creation of more liveable and enabling environments.

There are a number of key strategies that will facilitate future-proofing these include: building an evidence-base for best practice; building design databases of older people’s variability and share good design. Effectiveness also means building from several known successful initiatives. First, the World Health Organisation suite of age friendly tools; which includes the Global Age Friendly Cities Guide and the Checklist of Essential Features of Age-friendly Cities. Second, the Missed Business guide developed by the Australian Human Rights Commission and Marrickville Council aims to provide small businesses with information on how they can make their businesses more accessible to all their customers. Third, the Premier’s Council for Active Living (PCAL) aims to build and strengthen the physical and social environments in which communities engage in active living. The PCAL website offers a range of useful resources including evidence papers, planning and design guidelines. Fourth, the Australian Government’s Healthy Spaces and Places planning principles, in partnership with Australian Local Government Association (ALGA) has great potential to deliver social, economic and health returns through better planning of our built environments. Last, the new Liveable Housing Design guidelines raise awareness within the residential design and construction industry and governments about the benefits of incorporating universal design principles into new housing. The housing industry has embraced these guidelines and has developed a plan, which includes an aspirational target of having all new homes meet the guidelines by 2020.

**What next?**

More inclusive public spaces, housing, and transport are evolving but it is critical that we: move towards universal design for everyone; consult older people and include their views in the development of policy and planning initiatives; raise public awareness of cost substitutions being made; and that we develop a design database that adequately represents older Australians abilities and sizes to better inform planning decision-making. COTA NSW’s Age Friendly Environments Working Group is a cross sector partnership focussed on information sharing and developing strategies to promote age friendly resources and initiatives. Everyone benefits from future proofing – individuals, communities, and Governments. Age friendly presents benefits to people of all ages and range of mobility across the life course.