Future proofing our environments for an ageing population

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Aim

- Population Ageing and its implications
- Relevance to Planners and Designers
- Socially sustainable, inclusive design

Global Population Ageing

- By 2050, the number of older persons in the world will exceed the number of young for the first time in history.
- 80+ is the fastest growing age group in the world
- By 2050 one fifth of older persons will be 80 years or older
- Will have implications on how we plan and build our urban environments.


So what does this mean?

- At 65 years of age:
  - in 1800, you were dead 27 years ago.
  - in 1900, you were dead 12 years ago;
  - in 2000, you had 12-15 years to go;
  - in 2100, you may be two-thirds through your life!
- Even at 70 years of age many will still be working, probably part-time.
- One in four children born in 2001 are expected to live to a hundred; more if female.
- There is a linear correlation with ageing and disability
Limitations of stamina

Source: Steinfeld et al. 1979

Enabler ideogram

All humans change over time

Everyone WILL experience temporarily or permanently one or more of these impairments over their lifespan.

Source: Steinfeld et al. 1979

Health and Disability Continuum

Seeing Functions

- Mid-Moderate vision impairment: Needs eye glasses, contact lenses…
- Severe vision impairment: Needs operation
- Complete vision impairment (blind): Needs assistance – pension, device, assistant environmental modifications

Environmental impact on function over the lifespan

Functional Capacity

Early Life

Mid-Life

Maintaining highest possible level of function

Older Life

Preventing disability and maintaining independence

Disability Threshold

Environmental changes can lower disability threshold

Source: WHO 2002

WHO Age-friendly cities policies

- Early Life
- Mid-Life
- Old Life

Source: WHO 2002
Ageing Landscape

- Residential aged care: 5%
- Community based care: 17%
- Independent of care system: 77%

% growth in number of people aged 70+
- Living alone, 2006–2027, Sydney

Future proofing

- More cost effective than retrofitting.
- Public spaces - welcoming and promote safety and opportunities for active lifestyles.
- Transport accessibility allows all people to remain linked in with social networks, services and employment.
- Housing that is accessible and adaptable allows ageing in place.

Madrid Plan - Article 3

We reiterate the commitments made by our heads of State and Governments at major United Nations conferences and summits, at their follow-up processes and in the Millennium Declaration with respect to the promotion of international and national environments that will foster a society for all ages.

Adopted at the 10th plenary meeting, on 12 April 2002.
A review of the Madrid Plan outcomes in 2007-2008 by the Commission for Social Development found issues in:

- mainstreaming of ageing into policy development
- participatory involvement of older persons in implementation and evaluation of national activities,
- evidence-based approaches to policy development, implementation and evaluation.

Source: http://www.globalaging.org/agingwatch/opportunities.htm

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**The Power of Design**

“*We shape our buildings; thereafter they shape us.*”

Winston Churchill

“Most of the safety and mobility barriers currently encountered by older adults are a direct product of conventional design practice.”


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**Environmental issues impacting on older people**

- Household growth
- Household location
- Local centres and services
- Transport
- Technology
- Living independently, and
- Universal design.

Hanson, J. 2002, The Inclusive City: what active ageing might mean for urban design. Available online from eprints.ucl.ac.uk/3319/1/3319.pdf

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**Poor design deters and isolates**

- difficult access and changes of level
- poorly maintained pavements
- busy roads with few crossing points
- isolated unlit stops
- lack of adequate seating
- no public toilets; and
- high, steep steps.

Hanson, J. 2002, The Inclusive City: what active ageing might mean for urban design. Available online from eprints.ucl.ac.uk/3319/1/3319.pdf
Inclusive Design

**Peter Pan, those who will never grow old**

**Assistive Technology**

**Current programs may at times conflict**

- Eco sustainability
- Social sustainability
- Maintain physical activity levels
- Disability

**Inclusive Design Agenda**

**Healthy Ageing Agenda**

**Ageing continuum**

Alignment of Principles

**Planning & Design**

- Urban structure
- Urban typology, density, sustainability
- Accessibility
- Legibility and way finding
- Animation – design for activity
- Function and fit
- Complimentary mixed uses
- Character and meaning
- Order and incident
- Continuity and change
- Civil society – social capital

**WHO Checklist**

1. Outdoor Spaces
2. Transport
3. Housing
4. Social Participation
5. Respect and Social Inclusion
6. Civic Participation and Employment
7. Communication and Information
8. Community and Health Services

Urban Planning impacts safety

- Footways that are wide, and well maintained
- Bicycle lanes are separate from footways
- Pedestrian crossings have audible cues at a pitch and timing suitable for older people
- Paving is non-reflective in clear colour and textural contrast to walls
- Paving is flat and non-slip
- Spaces and buildings are oriented to avoid creating areas of dark shadow or bright glare
- Street lighting is adequate for visual impairments
- Level changes are clearly marked and well lit with handrails and non-slip, non-glare surfaces

**Age Friendly**

- Outdoor environments - welcoming
- Urban areas - small, well-defined open spaces with toilets, seating, shelter, lighting
- Quiet side roads as alternative routes away from crowds/traffic
- Acoustic barriers, such as planting and fencing, reduce background noise
- Minimal street clutter, such as a plethora of signs, advertising hoardings and bollards
- Seating - sturdy with arm and back rests and in materials that do not conduct heat or cold


**Urban Planning impacts participation**

- Absence of transport services (outer suburbs & regional areas)
- Excessive distances or steep
- Irregular or unreliable services
- Inconvenient or circuitous routes
- Queues and lack of seating at bus stops
- Excessive transfer waiting times between modes
- Lack of parking at stations (middle of the day)
- Crowding on trains and buses
- Difficulty negotiating stairs
- Concern about crime and anti-social behaviour on public transport and at transport nodes

Source: Bruce Judd, Dana Olsberg, Joanne Quinn, Lucy Groenhart & Oya Demirel (2009), AHURI UNSW-UWS Research Centre

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**Transport**

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**Building Design**

"Well, the post office does not have access. It is two large steps and they are cut in like that. So when you come out the door you have got to watch you don't fall down that step there."

*(Female 60-64 yrs, living alone, regional, separate house, self-funded retiree)*

Source: Judd, Olsberg, Quinn, Groenhart & Demirel (2009), AHURI UNSW-UWS Research Centre
Importance of tenure security (Judd, Kavanagh, Morris & Naidoo, 2004)

Loss of a partner impacts housing options (Babacan, Chamberlain, Dockery, Stockley & Wood, 2006)

Independent Living Units in peril (McNelis, 2004a; 2004b)

Homeownership supports ageing in place (Bridge, Phibbs, Kendig, Mathews & Cooper, 2008; Quinn, Judd, Olsberg & Demirbilek, 2009)

Poorer dwelling quality in rural areas… and fewer housing options (Jung, Y-M. & C. Bridge, 2010; Morton et al., 2004, p. 466; (Gallant et al., 2002).

“Is housing with a few simple design features, such as a reinforced bathroom walls, a flat entry to the house and wide corridors and doorways.”

The Property Council, Master Builders Australia and the Housing Industry Association have agreed a set of voluntary guidelines with a 2020 target, and Government will invest $1M over four years to promote Livable Housing.

Home ownership reduces the cost care

The risk of premature entry to residential care for older adults is linked to whether they occupy flats or public housing.

By contrast, home ownership is significant in lowering costs of in-home care.

Colour coding or cueing-in.

To prevent confusion use colour-coding which is simple and refers to broad functions (eg. one primary colour for “bedroom”, not different colours for every item in the bedroom).

Paint the outer door the same colour as the walls in the room.

If possible use colours which already have relevant associations. Common examples include yellow for “danger” and red for “stop”.

Use high contrast to indicate physical boundaries such as step edges and door frames or highlight a feature such as a towel rail or toilet seat (such as black / blue on white).
Liveable neighbourhoods

- Design and neighbourhood quality are critical to successful ageing in place (Quinn, Judd, Olsberg & Demirbilek, 2009)


Improvement in outdoor spaces, buildings, transportation, and housing in North America result from:

- Livable Communities Act of Minnesota
  - The Livable Communities Demonstration Account promoting transit and pedestrian oriented neighborhoods;
  - The Local Housing Initiatives Account promoting affordable housing; and
  - The Tax Base Revitalization Account promoting clean-up and redevelopment of polluted land.

- Strategic Plan of the Vancouver Regional District
  - Protect the Green Zone, build complete communities, achieve a compact metropolitan region, and increase transportation choice.
  - Each local government unit must have a "Regional Context Statement" in their Official Community Plan

BUT - Degree of happenstance and social and health aspects not addressed.

(Zebarth, Em., & Heang, 2010)

Change agents

- Agent for inclusion
  - Population extremes accommodated (tall, large, small, short etc.)
  - Demographics accommodated i.e. population ageing considered

- Agent for environmental change
  - Reduce building waste
  - Considers impact of climate change on air & water quality
  - Considers energy requirements

- Agent for social change
  - Links to Community
  - Links to Transport
  - Links to Education etc.

- Agent for economic good
  - Contributes to reduced accidents & injuries
  - Supports staff
  - Provides meaningful employment
  - Builds knowledge
  - Runs cost efficiently

- Agent for inclusive change
  - Population extremes accommodated (tall, large, small, short etc.)
  - Demographics accommodated i.e. population ageing considered

Conclusions

- Design for you
- Impact on older people
- More cost effective than retrofitting

Useful links
www.cotansw.com.au