

The Future of Bathroom Design for an Aging Population
An Architect's Guide







Introduction

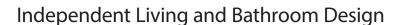
Australia's ageing population is set to double over the next 40 years. Since 1970, the proportion of people aged 65 years and over has increased to 13%; a figure which is set to almost double, to 25% in the next 40 years¹. The implications of such an increase will result in higher costs associated with both the provision and maintenance of aged care services.

By 2042, there will only be 2.5 'working age' Australians for every Australian aged over 65; resulting in fewer tax payers supporting aged care services. With the costs of living on the rise, it is predicted that the financial burden of aged care services will be at its highest within the next 30 years, with spend increasing from 0.7% of GDP in 2006-07, to 1.9% by 2046-47².

A key focus area for the future of Australian aged care services will be the promotion of independent living. Currently, some of the most expensive services in aged care relate to residential³ and hospital care services, with the total cost of hospitalisations due to fall-related injuries amongst over 65's projected to double by 2015 ⁴. Independent living eases pressure on Australia's aged care system and recent research has shown that older people report higher levels of health and well-being when they are able to stay at home⁵.



"Bathrooms are frequently cited as a high-risk environment for older persons."



Research shows that the bathroom is a high-risk environment for senior persons⁶. Bathroom design is an important factor in enabling the elderly to maintain independency at home for longer⁷.

The government has made a discerned effort to address the design issues of the bathroom environment amongst architects and specifiers. To ensure there is a clear focus on delivering livable spaces for aged care, the government has introduced a number of changes and initatives. These include changes to the Building Code of Australia (BCA) disability access codes⁸, the CSIRO's 'Smarter, Safer Homes' initiative⁹ and new design guidelines through Liveable Housing Australia (LHA)¹⁰. These initiatives are enabling the older Australian's to stay at home longer and provides them with functional yet stylish bathroom options.



Trend of Retrofitting - Form vs. Function

The age of consumers considering aged care design is decreasing, with 23% now sitting in the 45-54 age bracket¹¹. This change in mindset is resulting in individuals planning ahead, with the intention to stay at home longer. Furthermore, property owners are increasing the frequency with which they re-fit their bathrooms¹², and as part of the process are considering design options which cater for independent living.

As the age of those considering the needs of independent living decreases, it's important to ensure that the designs are not only practical, but it is also aesthetically pleasing and in line with contemporary trends. As well as this, home owners will be thinking about adding value to the overall property with practical and well designed bathrooms¹³.

"A reported 23% of consumers considering aged care design are in the 45-54 age range."





Research in Age Care Bathroom Design

Despite mounting pressure from the government and an increased demand from consumers to prioritise aged care design, very little research has been done to ascertain specific bathroom design requirements for Australia's aging population.

Dr Catherine Bridge, Director for Home Modification Information Clearinghouse Program, at UNSW, claims that aged care bathrooms are often designed without any understanding of the basic needs of those who are most likely to be using them. "A lack of knowledge about bathing environments, uncertainty about the design preferences of older people, lack of basic human factors data, design guides and standards without an adequate validation process, and reports of design practice not based on empirical evidence, are hallmarks of current bathroom design."

Caroma and Independent Living

Today Caroma offers a range of products to cover every aspect of bathroom functionality; from grab rails, raised toilets and rail showers to single-lever mixer taps and cistern-wide back rests.

The entire independent living portfolio can be retrofitted enabling easy upgrades to existing bathrooms. The range incorporates both stainless steel and chrome finishes which provide timeless aesthetics ensuring a bathroom can reflect functional contemporary designs.

As a leader in bathroom innovation, Caroma is working on collecting new information that will provide greater clarity on the future design requirements for independent living.



"Caroma is gathering new data that will provide clarity on design requirements for independent living."

Future of Aged Care Bathroom Design

Caroma's design philosophy for the development of new aged care products is to base it on product innovation, laboratory testing and the improvement of factual data.

The application of this approach is clearly evident in their latest care products including Caroma armrests and the Caravelle Support Suite. The armrests multi-functional design means that they can be easily added and removed for adaptability. The new Caravelle Care Easy Height Suite features an integrated back rest providing extra comfort and support and can be coupled with the armrests. The armrests have also been load tested to 160kg, providing additional peace of mind. Considering that over half of all bathroom injuries amongst persons 85 or older occur on or near the toilet¹⁵ developments like the armrests provide extra safety and can assist in the prevention of such accidents.



Recognising the need for information more relevant for older Australians, the Australian Research Council has funded the 'Liveable Bathrooms for Older People' Project. The project is being undertaken by Caroma in partnership with the University of New South Wales¹⁶.

The research aims to provide in-depth testing and analysis of how older Australians use bathrooms on a daily basis. This information will be used to form future design principles and key areas where crucial planning is required. This includes easier access and use of the toilet and bath as well as considering things like the height of the toilet.

With this vital information on hand, Caroma's intention is to lead the way in age friendly bathroom design and enable elderly people to stay independent for longer and in a safe environment.

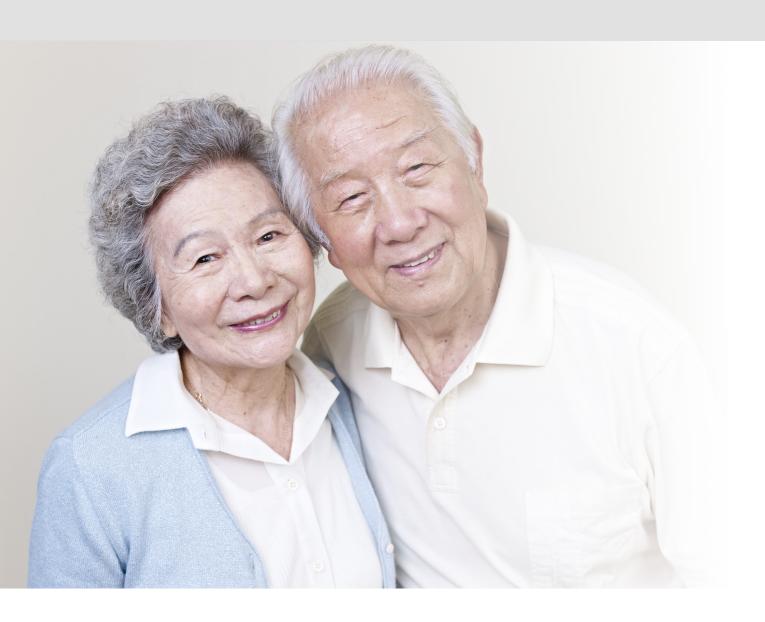
"'Liveable Bathrooms for Older People' aims to provide an in depth analysis of how the elderly use bathrooms on a daily basis."



It's the fixtures that stamp the style of a bathroom; the basin, the toilet suite, the shower, the taps or mixers and the bath. Finding the right balance between stunning appearance and sustainable performance is not always easy. Unless your choice involves Caroma.

Nordic Care Basin Mixer

As Australia's leading bathroom brand, Caroma can help you create your perfect bathroom. For more than 60 years Caroma has offered a strong local manufacturing presence, market leading product solutions, a commitment to sustainability and much more.







[1] The Economic Implications of an Ageing Population, Australia's Demographic Challenges, Australian Government Treasury.

[1] The Economic Implications of an Agent Population, Australia Demographic Challenges/html/adc-04.asp [2] "Future Demand for Aged Care Services", pg 36, Productivity Commission, Australian Government: http://www.pc.gov.au/_data/assets/pdf_file/0010/83386/05-chapter3.pdf [3] "Future Demand for Aged Care Services", Productivity Commission, Australian Government:

http://www.pc.gov.au/__data/assets/pdf_file/0010/83386/05-chapter3.pdf [4] Queensland Health, "Fall Statistics: Future Predictions", 2012:

http://www.health.qld.gov.au/stayonyourfeet/facts/statistics.asp

[5] 'CSIRO app to help older people live at home safely', Aged & Community Services Australia, 8th August 2013: http://www.agedcare.org.au/national-report/acsa-national-report-issue-312-8-august-2013-1/csiro-app-to-help-older-people-live-at-home-safely [6] Australian Commission on Safety & Quality in Healthcare, "Preventing Falls and Harm from Falls in Older People: Best Practice Guidelines for Australian Hospitals" (Section 2.6), 2009: http://www.safetyandquality.gov.au/wp-content/uploads/2012/01/Guidelines-HOSP1.pdf

[7] Falls and Fractures, National Institute on Aging (NIA), 2012: http://www.nia.nih.gov/health/publication/falls-and-fractures

[8] Hendry Building Regulations Blog, "Disability Access: Aged Care Facility: Building Regulations", 2012:

http://www.buildingregulations.net.au/?p=1443 [9] CSIRO, "Smarter, Safer Homes", 2012:

http://www.csiro.au/Organisation-Structure/Divisions/Computational-Informatics/Smarter-safer-homes.aspx

[10] Design Guidelines, Liveable Housing Australia, September 2012:

[10] Design distance interval in country and a stance in the properties of the prope

http://www.bpn.com.au/news/hia-predicts-kitchen-and-bathroom-activity-to-cont [13] "A bathroom upgrade worth between \$10-15,000 will infact increase the perceived value of the property by up to \$100,000", 'Changes that Add Value', Domain Renovation Features, June 2010: http://news.domain.com.au/domain/diy/changes-that-add-value-20100611-y2fe.html

[14] Dr Catherine Bridge, Director of the University of New South Wales' Home Modification Information Clearinghouse Service Program, 17th Jan 2013: http://www.architectureanddesign.com.au/comment/livable-bathroom-design-among-keys-to-healthy-aust

[15] 'Nonfatal Bathroom Injuries Among Persons Aged >15 Years', Centers for Disease Control and Prevention (United States), 10th June 2011: http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6022a1.htm

[16] Livable bathroom design among keys to healthy Australian homes, Architecture & Design, 17th January 2013: http://www.architectureanddesign.com.au/comment/livable-bathroom-design-among-keys-to-healthy-aust

