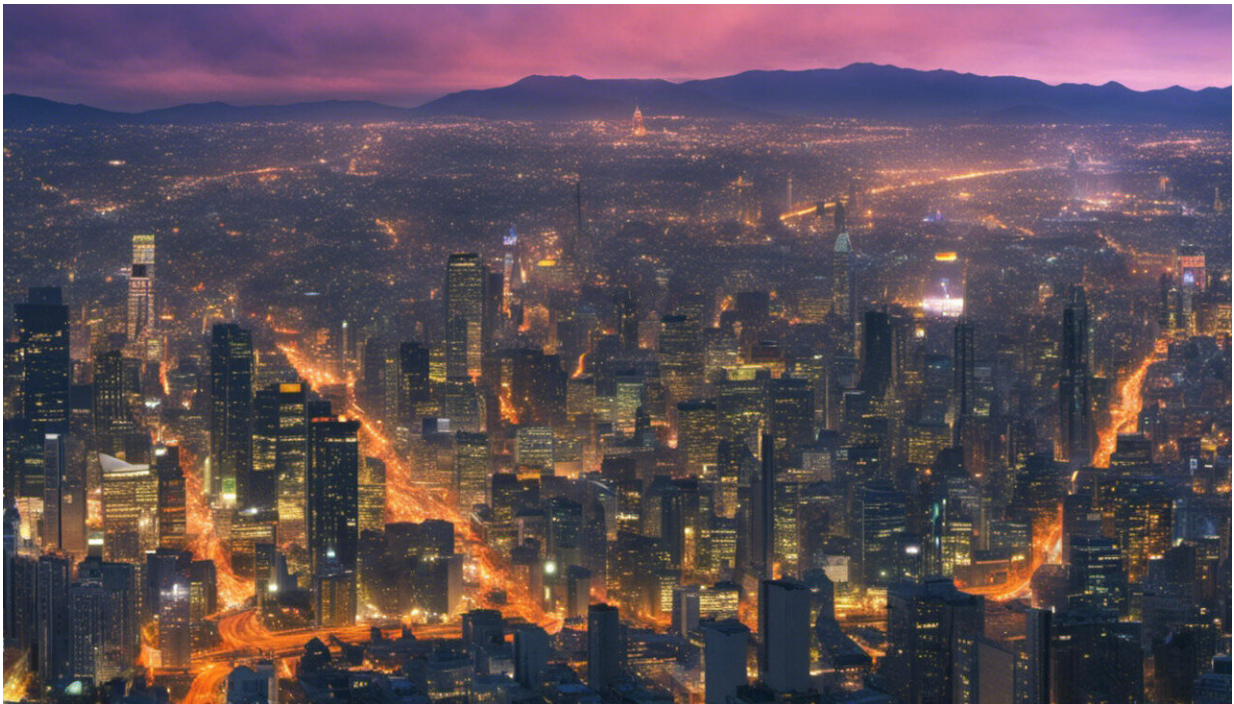


# This is how we create the age-friendly smart city

March 4 2021, by Sonja Pedell and Ann Borda

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Credit: AI-generated image ([disclaimer](#))

Senior citizens need help and encouragement to remain active as they age in their own communities. Given the choice, that's what most would prefer. The smart city can provide the digital infrastructure for them to find and tailor the local neighborhood information they need to achieve this.

Australia has a [growing population of older adults](#), the [majority living in cities](#). The challenge, then, is to ensure [city](#) environments meet their needs and personal goals.

[Our research](#) shows [senior citizens](#) want to pursue active aging as a positive experience. This depends on them being able to stay healthy, participate in their community and feel secure.

Most city planning efforts to encourage active aging are siloed and fragmented. Older people are too often shut away in retirement villages or nursing homes rather than living in the community. Current approaches are often based on traditional [deficit models](#) of focusing on older people's declining health.

Another issue is that senior citizens are treated as receivers of solutions instead of creators. To achieve real benefits it's essential to involve them in developing the solutions.

## **Working towards age-friendly cities**

To counter a [rise in urban ageism](#), the World Health Organization (WHO) has been promoting [age-friendly cities](#) for nearly 15 years. Its age-friendly framework includes these goals:

- equity
- an accessible physical environment
- an inclusive social environment.

Cities and towns around the world, including [local councils in Australia](#), have begun working towards this.

We need to recognize the diverse demands of living in cities, where most seniors live, particularly as we age.



Credit: AI-generated image ([disclaimer](#))

Smart city approaches can make urban neighborhoods more age-friendly. One way technology and better design do this is to improve access to the sort of information older Australians need—on the walkability of neighborhoods, for example.

Our research has considered three factors in ensuring smart city solutions involve older Australians and work for them.

## **Replace ageism with agency**

Government efforts have [focused on increasing life expectancy](#) rather than improving quality of life and independence. Ignoring quality of life

leads to the perception of an aging population as a burden to be looked after.

It would be better to bring about changes that improve older people's health so they can participate in neighborhood activities. Social interaction is a source of meaning and identity.

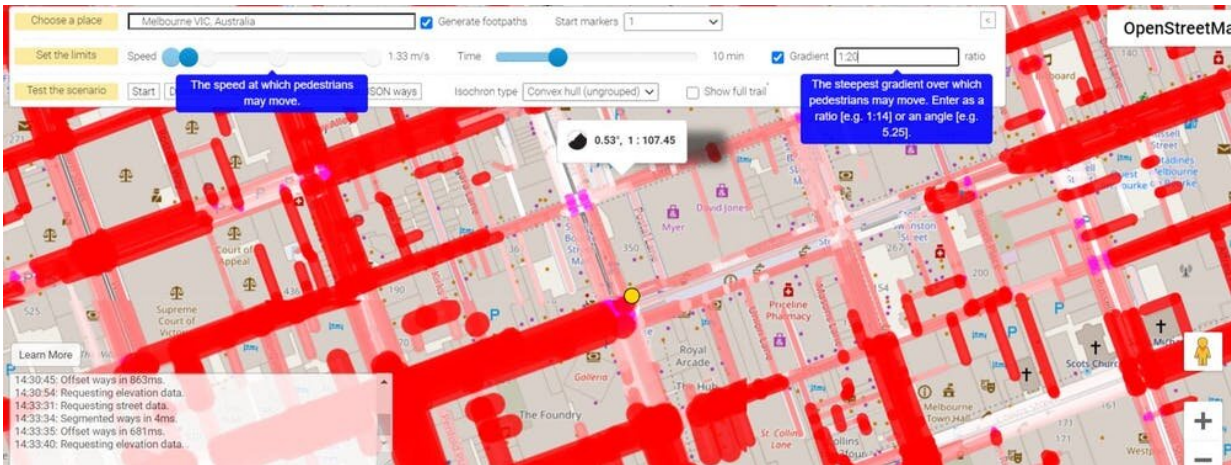
Active participation by [older adults](#) using [digital devices](#) can give them agency in their lives and reduce the risk of isolation. [Bloomberg reports](#) older adults have become empowered using technology to overcome social isolation during the COVID-19 pandemic.

## Connect to smart city data

Cities are about infrastructure. Senior citizens need to have access to information about this infrastructure to be motivated to spend time in their neighborhood and reduce their risk of isolation.

Growing numbers of active aging seniors are "[connected](#)" every day using mobile phones to interact with smart city services. Many have wearable devices like [smart watches](#) that help monitor and manage their health and physical activity.

These personal devices can also be used to better connect older adults to public data about urban environments. For example, imagine an age-friendly smart city "layer" linked to a smart watch, to highlight facilities such as public toilets, water fountains and shaded rest stops along exercise routes.



PedCatch is an app that combines animated pedestrian accessibility modelling, topographical mapping and crowd-sourced geospatial data. Credit: Marcus White, Swinburne University, Author provided

[Access Map Seattle](#) is an example of an age-friendly, interactive, smart city map that shows the steepness of pedestrian footpaths and raised kerbs. The [National Public Toilet Map](#), created by the Australian Department of Health and Aging, and Barcelona's [smartappcity](#) are among other mobile apps integrating city services and urban plans.

The rise of "[urban observatories](#)" has increased the gathering and analyzing of complex city-related data. These data make it possible to build a [digital city layer](#).

This information then helps us understand and improve the [liveability of neighborhoods](#) for older adults. The data can be used for more proactive policy and city planning.

## Include co-design in planning

[Co-design processes that involve older adults](#), giving them agency in [smart city](#) planning, lead to greater participation and inclusion.

We need to start asking senior citizens questions like "How would you like to access this data?" and "What would you like the digital layer to tell you?" Their goals and needs must drive the information provided.

It's not just a matter of deciding what specific data older adults want to get via their devices. They should also be able to contribute directly to the data. For example, using a mobile app they could [audit their neighborhood](#) to identify features that help or hinder walkability.

To create truly age-friendly smart cities, it is important for older people to be co-designers of the digital layer. The co-design includes deciding both the types of data available and how the data can be usefully presented. We also need to understand [what mobile apps](#) could use the data.

If we know what information within the digital city layer motivates older adults to participate more actively in their neighborhoods, we can plan more age-friendly cities.

Through connecting infrastructures and citizen-led approaches, we can achieve social participation and inclusion of citizens regardless of their age and recognizing diversity and equity. We will create places where they feel capable and safe across a range of activities. Redesigning age-friendly and smart communities directly and collaboratively with those affected can enable them to achieve the quality of life they desire.

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