

AUCKLAND 2050

## Healthy Ageing in a Smart Urban Future: Co-designing this with Asian Older Adults in Auckland

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### Abstract

Auckland mirrors global patterns of urbanization and population ageing, where digital innovation and demographic change evolve together. As the economic dependency ratio rises, questions on how cities support older adults' wellbeing become urgent. By 2043, Asian communities will form almost half of Auckland's population, with a rapidly growing 65+ group. Many faces language, culture and digital barriers. These realities raise the guiding question of this study: How can Auckland's evolving smart city systems be leveraged to support future healthy ageing among Asian populations? The research is framed by critical realism, which recognises both the lived experiences of individuals and the structural forces that shape them, and by critical inquiry and anticipatory governance, which together ask who benefits or is left behind in smart urban, and how governance can adapt to disruptive future uncertainties such as AI, biotechnology, and climate change. Using a co-design approach, bringing together older adults and key stakeholders in a culturally adapted "World Teahouse" workshop (an iteration of the World Café inspired by Asian tea culture to foster comfort and participant). Across 2-4 sessions, participants engage in games, storytelling, and mapping to co-create insights on how healthy ageing, migrant, technology and co-design intersect in Auckland's future urban governance. The study will generate a shared artefact (e.g. ecosystem map, narrative scenarios, or a community-based co-design model) that acts as a signpost for policymakers and communities. Data will be analysed through a participatory and reflexive process, combining collaborative sense-making with thematic analysis and integrating participant feedback throughout. As a practice-led inquiry grounded in the researcher's cross-cultural perspective, the study's contribution lies in reframing healthy ageing as a governance as well as urbanism challenge rather than only a medical issue, and in showing how co-design with Asian elders can open new, inclusive, and future-ready pathways for urban systems that can help Auckland and other cities.

### Introduction

Auckland is widely recognized as New Zealand (NZ)'s only globally scaled metropolitan city, given its concentration of population, economic activity, and international links (Auckland Council, 2021). As the country's main gateway, it hosts the largest share of international travel and trade. Geographically, it sits on a narrow isthmus between two harbours, placing it at a strategic crossroads. It is a city where

demographic ageing and digital transformation are accelerating simultaneously, two powerful forces that are reshaping the meaning of community, belonging, and wellbeing (United Nations, 2024; World Health Organization, 2020). On one hand, sensors, data, and artificial intelligence (AI) are being woven into urban infrastructures, promising efficiency and innovation (Kitchin, 2014; Luque-Ayala & Marvin, 2015). On the other, the city's population is ageing faster than ever, with the number of residents aged 65 and above expected to almost double by 2038 (Stats NZ, 2025).

Asian older adults represent one of the fastest growing and most diverse communities (Auckland Council, 2021). By 2043, Asians are projected to make up nearly half of Auckland's total population (Stats NZ, 2022). Yet for many of these older adults, who navigate new languages, cultural expectations, and digital systems, the city can feel more like a landscape of barriers than of belonging (Chen & Buckingham, 2025; Montayre, 2019). While "smartness" is celebrated as a hallmark of progress, questions of who benefits, who participates, and who is left behind are rarely addressed (Graham & Marvin, 2001).

This research begins with that unease. It asks how Auckland's evolving smart-city systems can be leveraged to support future healthy ageing among Asian populations? Framed within the wider movement toward Healthy Cities and Age-friendly Auckland, this project recognises that healthy ageing is not only a biomedical or behavioural issue, but also a governance challenge, a matter of how policies, infrastructures, and technologies are designed and coordinated (Guston, 2014; WHO, 2020). To truly build a city for all generations, we must bridge the gap between high-level digital strategies and the lived experiences of those who call Auckland home.

Auckland provides a uniquely fitting site for such an inquiry. As I often describe it to others, "Auckland is small enough to experiment, yet big enough to matter." Its manageable scale allows for genuine collaboration and policy innovation, while its diversity and complexity mirror global urban futures. It is a city where the lessons of co-design and inclusion could ripple far beyond its shores.

## **Planned Methodology**

The study is grounded in critical realism, which holds that reality operates on multiple levels, including what people experience and what structures govern those experiences (Bhaskar, 1975). This lens allows the research to explore both the visible dimensions of ageing in Auckland (such as mobility, housing, and digital access) and the invisible governance mechanisms, like policy silos, data infrastructures, and institutional logics that shape inclusion or exclusion (Marvin et al., 2016).

The theoretical framing combines critical inquiry and anticipatory governance. Critical inquiry asks who gains and who loses within current systems; anticipatory governance extends this question into the future: how can we prepare for uncertainties brought by AI, biotechnology, and climate change (Guston, 2014)? Together, these approaches turn the study into both a diagnostic and a forward-looking exercise. Methodologically, this research adopts a co-design approach, integrating creative participation with

policy analysis (Berg & Gulden, 2012; Sanders & Stappers, 2014). The central fieldwork method is an adapted World Café process, here envisioned as a “World Teahouse.” This format invites older Asian adults (aged 55+), policymakers, service providers, and technology actors into culturally resonant dialogues, sharing tea, stories, and ideas in both English and heritage languages (Brown & Isaacs, 2005).

Through several structured rounds of small-group discussion, participants will rotate between tables, building on each other’s ideas. The process balances accessibility and analytical depth: stories, sketches, and maps will emerge as tangible expressions of how older adults imagine healthy ageing in a digital city.

Data will be collected in three layers: 1) Empirical: transcripts, notes, sketches, and ecosystem maps from the World Teahouse sessions; 2) Structural: policy and planning documents such as the Auckland Plan 2050 and Age-friendly Action Plan (Auckland Council, 2021); 3) Speculative: co-created future scenarios (e.g., “Inclusive Tech City 2040,” “Community Resilience 2050”).

Thematic and framework analysis will be used to connect these layers (Gale et al., 2013), revealing not only what people say but also how governance systems enable or constrain their visions. The study will culminate in an artefact, a visual and narrative Ecosystem Map of Smart Healthy Ageing that policymakers, planners, and communities can use as a conversation tool for equitable urban futures.

This project positions healthy ageing as a whole-of-system issue embedded within digital urbanism. It reframes “smart city” as not just a technological project but a value-driven and cultural one, a question of how we care, design, and govern collectively in an age of data and diversity. Conceptually, it advances an integrative framework linking the social determinants of health, critical smart urbanism, and participatory governance. Empirically, this study brings to the forefront the experiences of Asian older persons, whose perspectives remain largely absent from conversations on ageing and digital health. Methodologically, it contributes an innovative cross-cultural adaptation of the World Café method, creating a model of participatory research that honours cultural meaning-making and inclusion.

Practically, it aims to inform future urban policy and planning in Auckland, supporting agencies to design systems that are both technologically advanced and socially just.

Beyond the local context, this study aspires to offer a Pacific exemplar of smart ageing governance, demonstrating how mid-sized nations can pioneer inclusive digital futures that larger cities might one day emulate.

## **Words of Wisdom/Dreams for 2050/Personal Reflections**

Healthy ageing, to me, is not a final stage of life, it is a continuous, collective process. It lives in my parents’ Taiji or Yoga practice by the morning sea in Takapuna, in my neighbours’ quiet laughter shared over afternoon tea in local community halls, and in the future, that my daughter will one day inhabit. Ageing is not confined to the older adults; it belongs to everyone.

Each of us is already ageing, every moment, together. The way we care, build, and imagine today will one day shape the world we grow old in (Phillipson, 2013).

As a migrant, a younger generation, and a scholar, I have come to understand ageing not only through theory but through daily encounters, with systems that sometimes include and sometimes exclude, with technologies that both connect and distance us. I do not see technology as an enemy of humanity, nor as its saviour, but as a mirror, reflecting our collective intentions, our empathy, and our blind spots (Verbeek, 2011). A truly “smart” city is not one that collects more data, but one that learns how to listen more deeply.

This research has reminded me that the measure of a city is not only in its infrastructure or policies, but in its emotional architecture, the unseen networks of care that hold generations together (Tronto, 2013). Healthy ageing is therefore a shared act of design: we are not just preparing for the old age of others, but co-creating the world in which we, too, will grow old.

For future researchers, my advice is this: approach this field with humility and imagination. Seek out the quiet forms of wisdom that reside in lived experience, and let technology serve, not define, the human story (Pols, 2017). In 2050, may Auckland not only be a smart city, but a wise one, a place where growing older means growing more connected, and where every generation can see its future reflected with dignity and hope.

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## Short Bio



**Cassie (Xi) Wang** is a doctoral researcher at Auckland University of Technology, exploring how smart-city governance can support healthy ageing and wellbeing among migrant and ethnic minority communities in Aotearoa New Zealand. Her work lies at the intersection of public health, health policy and digital health, often guided by a belief that “technology should serve the human story, not define it.” Originally trained in public health and social research, she has led and collaborated on projects spanning maternal health, health management, health education and smart-city innovation in both China and New Zealand.

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