Asia-Pacific
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APEC Digital Solutions and Technologies for Senior Citizens' Connectivity and Healthiness

Best Practice Report

APEC Policy Partnership on Science, Technology and Innovation
December 2025

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List of Acronyms

ACAI	ASEAN Centre for Active Ageing and Innovation
ADB	Asian Development Bank
AI	Artificial Intelligence
AIoT	Artificial Intelligence of Things
APEC	Asia-Pacific Economic Cooperation
HWG	Health Working Group
IMDA	Infocomm Media Development Authority
IoT	Internet of Things
ITU	International Telecommunication Union
LTC	Long-term Care
MSIT	Ministry of Science and ICT
MIIT	Ministry of Industry and Information Technology
NLP	Natural Language Processing
OECD	Organisation for Economic Co-operation and Development
PPSTI	Policy Partnership on Science, Technology and Innovation
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
WHO	World Health Organization

Acknowledgements

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Special thanks are extended to the professional interviewees and distinguished speakers from APEC economies listed in the annexes, including government agencies, research institutions, universities, companies, and NGOs. Their knowledge, experience, and solutions provided the foundation for this report and deepened our understanding of digital and technological transformation.

Meanwhile, this project holds a personal meaning for me. When I began this research, I carried a somehow doubts about my own later life. However, through conversations with experts, policymakers, and practitioners across the region, I have gained confidence and peace of mind. I learned that digital solutions and technologies can empower older adults with dignity and care.

I would like to express my heartfelt gratitude to my parents, whose love and values continue to guide my understanding of care and respect. I also dedicate this work to the memory of my beloved aunt and uncle, who passed away this year. Their courage and dignity reminded me why this topic matters. It is not only for solutions and policies, but for every individual seeking meaning, connection, and respect in their final chapters.

All reinforce our shared commitment to APEC's vision, building a connected, healthy, and sustainable future for all generations.

Executive Summary

As APEC undergoes one of the most profound demographic transitions in history, leveraging innovation has become essential to ensure inclusive and sustainable growthy. Echoing this priority, the 2025 APEC Leaders' Gyeongju Declaration underscored this demographic challenge and called for collective response through holistic and intergenerational policies.

Against this background, this research report provides a comprehensive analysis of how digital solutions and technologies can enhance connectivity and healthiness of older adults across APEC.

- Digital connectivity, digital literacy and capacity building, strengthening functional ability.
- Digital health solutions, and long-term care (LTC) and caregiver support, enhancing intrinsic capacity.

The study employed a mixed methodology combining desk research, expert interviews, and insights from the seminar. Policy documents, strategies, and digital solutions and technologies from APEC economies were systematically reviewed, complemented by interviews with 11 experts from academia, government, companies, and NGOs. Furthermore, insights from 35 speakers representing 15 economies were synthesized into structured findings.

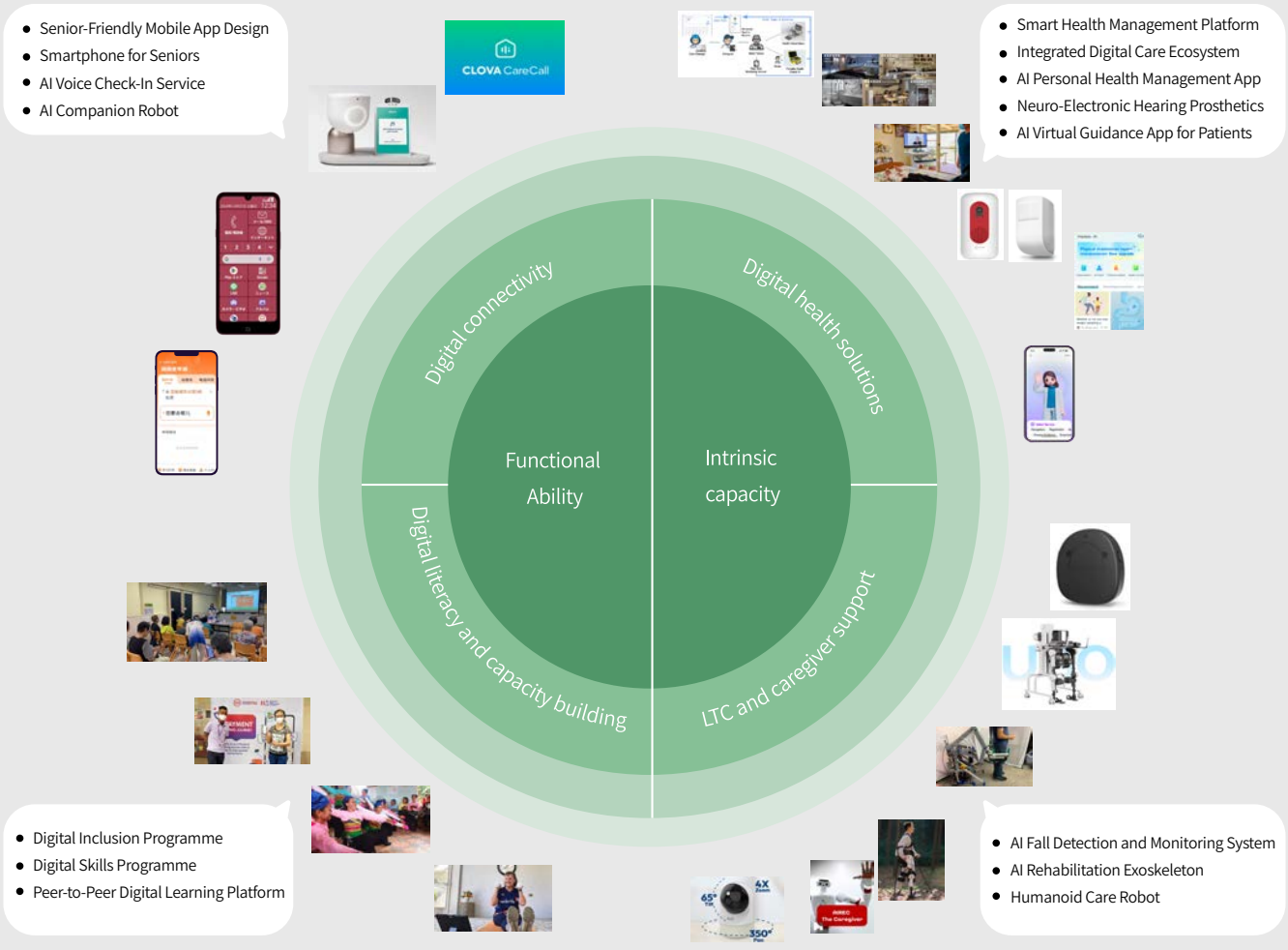
Findings reveal that APEC economies have made significant progress in expanding connectivity, digital literacy, and digital health innovation. Economies such as Australia; Japan; the Republic of Korea; and Singapore have integrated telehealth, e-health records, and age-friendly design into their systems. Some economies such as Chile; China; Malaysia; Thailand; and Viet Nam have advanced inclusive models that combine technology with empathy through peer mentoring, local data platforms, and social enterprises. Cases from Brunei Darussalam; Hong Kong, China; Indonesia; New Zealand; the Philippines; and Russia have contributed valuable insights on digital urban planning, family- and community-led inclusion, and successful ageing strategies.

Across all contexts, a consistent message emerged: digital solutions and technology are no longer peripheral, but central to the way APEC economies must respond to rapid demographic change. Digital solutions and technological innovations for older adults must be embedded within APEC's inclusive growth agenda.

The report concludes with four key policy recommendations:

- Closing the infrastructure, connectivity, and affordability divide through universal broadband access, affordable data plans, age-friendly design, and cross-border sharing of technical and interoperability standards.
- Embedding digital literacy into lifelong learning, by institutionalizing older people digital training programmes, scaling intergenerational and peer-to-peer training, and integrating these efforts into community services.
- Integrating digital health into economy-wide systems, by promoting integrated smart elderly care ecosystems, promoting applications with AI and other emerging technologies, mandating interoperability standards for e-health, and leveraging regional cooperation on technologies and sandboxes programmes.
- Supporting caregivers through digital ecosystems, by expanding digital support platforms, deploying smart-home and monitoring technologies, advancing the use of robotics, and ensuring policy recognition of caregiver's contributions.

By embedding digital-ageing strategies into economywide reforms and regional cooperation, APEC can ensure that its older adults are not left behind, but instead stand at the forefront of a more connected, healthy, inclusive, dignified, and sustainable Asia-Pacific future.



Introduction

The Asia-Pacific region is undergoing one of the most profound demographic shifts in history. According to the United Nations' data, in 2024, APEC economies were home to more than 400 million people aged 65 and above, representing nearly two-fifths of the world's elderly population. This figure is projected to reach over 900 million by 2050 (United Nations, 2024).

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The pace of ageing is remarkable. While Europe took more than a century to double the share of its elderly population from 10 to 20 percent, economies such as China and the Republic of Korea will undergo the same transition in less than two decades. By 2040, more than half of APEC economies will have become “aged” (14% aged 65+) or “super-aged” (20% aged 65+) (United Nations, 2024). Hong Kong, China; Japan; and the Republic of Korea will face the heaviest demographic pressures.

These demographic shifts have reshaped economic structures, healthcare systems, and social participation across APEC, calling for collective innovation and regional cooperation (San Andres & Seah Jiaqi, 2025). Thus, ageing and technology have become central policy priorities across APEC working groups recently, particularly the PPSTI and the Health Working Group (HWG). In 2025, APEC health ministers emphasized that strong and resilient health systems, supported by digital technology and artificial intelligence (AI), are essential to turn ageing into an opportunity rather than a crisis (APEC, 2025a). Other APEC events, such as the 15th High-Level Meeting on Health and the Economy and the Public-Private Dialogue on Demographic Change, both underscored that demographic transitions will fundamentally reshape labor, fiscal, and social systems across the region. They called for cross-sector collaboration to promote healthy and dignified ageing through innovation and inclusion (APEC, 2025b).

Amid these changes, older adults today increasingly face a dual set of needs. On the one hand, they depend on connectivity, both digital and social, to remain engaged, independent, and able to participate in their communities. On the other hand, they require accessible and affordable health solutions to manage chronic conditions, maintain intrinsic capacity, and ensure quality of life (WHO, 2021a; UNESCAP, 2022a). Caregivers, whether family members or professionals, also need support through tools that reduce burdens and improve the coordination of care.

In this context, digital solutions and technologies have emerged as critical enablers of healthy and inclusive ageing, as emphasized by the International Telecommunication Union (ITU, 2021) and the Organisation for Economic Co-operation and Development (OECD, 2020). Across the world, digital connectivity provides older adults with access to information, communication, and online services. Smart homes, robotics, and monitoring tools enhance independence in daily living; telemedicine, wearable monitors, and e-health applications are improving health access and disease management; training programmes and age-friendly interface designs build digital literacy, while remote monitoring platforms and respite tools provide essential support for caregivers (ITU, 2021; OECD, 2020; Asian Development Bank [ADB], 2024). Together, these innovations have the potential to extend autonomy for older adults, relieve systemic pressures, and strengthen inclusive growth.

To translate these global technological trends into regional insights, this study draws on the WHO framework on healthy ageing, which emphasizes functional ability as the foundation for connectivity and intrinsic capacity as the basis for healthiness (WHO, 2015).

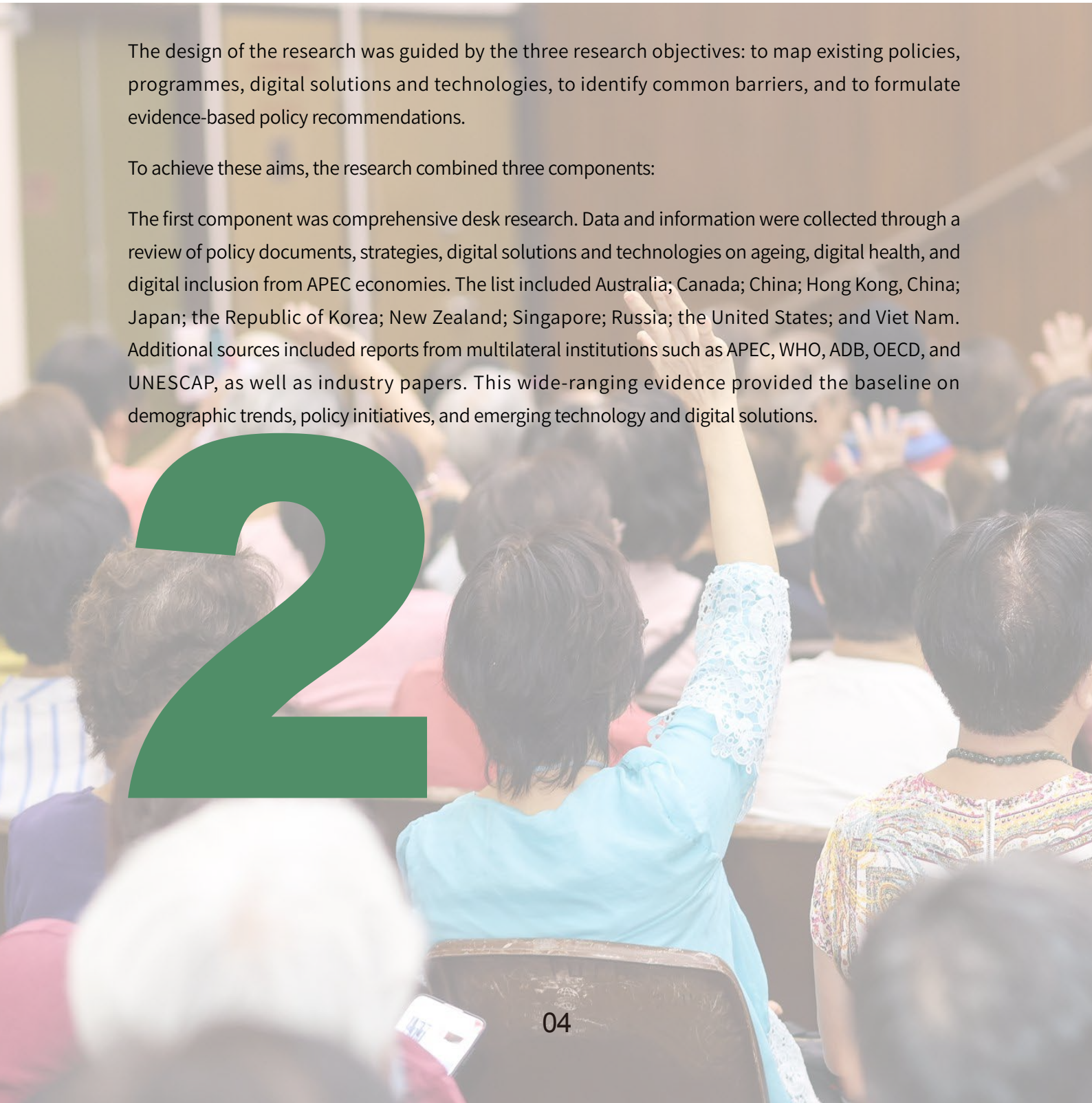
Building on international literature and regional priorities, the study identifies four dimensions under the framework: digital connectivity, digital literacy and capacity building, digital health solutions, and LTC and caregiver support (WHO, 2015; ITU, 2021; OECD, 2020; ADB, 2022; UNESCAP, 2022).

Accordingly, the purpose of this report is to explore how digital solutions and technologies can enhance older adults' connectivity and healthiness, while supporting caregivers and easing systemic pressures on health and social care systems. The research pursues three objectives:

- To map existing policies, programmes, digital solutions and technologies that promote connectivity and healthy ageing.
- To identify common barriers in digital access and health-related services.
- To formulate evidence-based policy recommendations for inclusive digital and health policies for older adults.

This project was developed under the APEC PPSTI framework to strengthen cross-economy collaboration on digital and technology empowerment and ageing. By sharing policy insights and identifying practices across the four core dimensions, the research aims to support APEC economies in advancing a more connected, healthy, inclusive, dignified, and sustainable Asia-Pacific future.

Methodology



The design of the research was guided by the three research objectives: to map existing policies, programmes, digital solutions and technologies, to identify common barriers, and to formulate evidence-based policy recommendations.

To achieve these aims, the research combined three components:

The first component was comprehensive desk research. Data and information were collected through a review of policy documents, strategies, digital solutions and technologies on ageing, digital health, and digital inclusion from APEC economies. The list included Australia; Canada; China; Hong Kong, China; Japan; the Republic of Korea; New Zealand; Singapore; Russia; the United States; and Viet Nam. Additional sources included reports from multilateral institutions such as APEC, WHO, ADB, OECD, and UNESCAP, as well as industry papers. This wide-ranging evidence provided the baseline on demographic trends, policy initiatives, and emerging technology and digital solutions.

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To ensure rigor, clear selection criteria were applied to identify best practices in digital solutions and technologies. Each case was assessed by five benchmarks: demonstrated impact on older adults; innovativeness and sustainability; scalability within and beyond the originating economy; inclusiveness in reaching vulnerable groups; and alignment with APEC's goals.

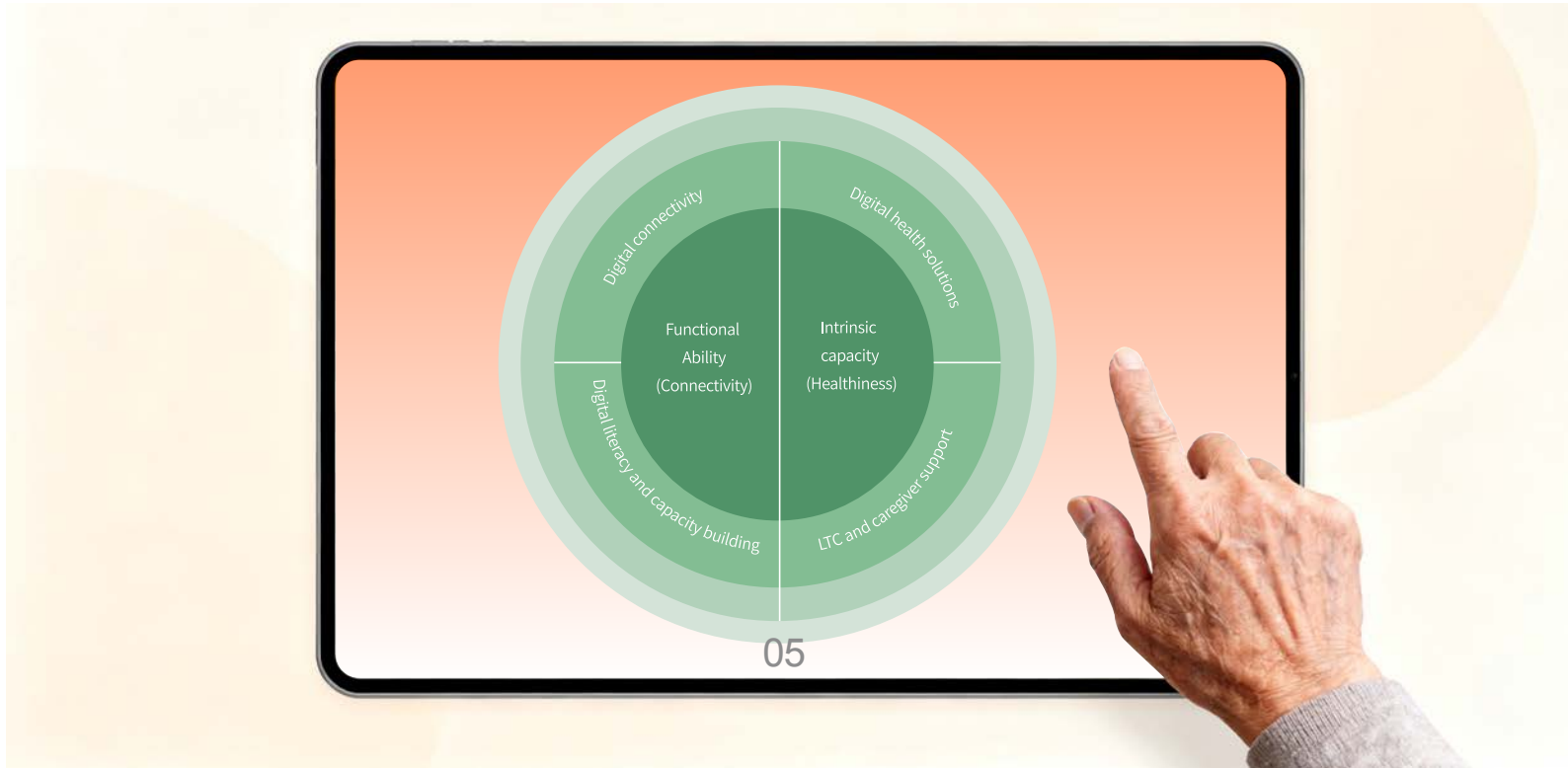
The second component involved semi-structured interviews. Eleven interviews were conducted with policymakers, private sector innovators, academics, and NGO leaders from APEC economies. These discussions explored the implementation of digital health and connectivity programmes, adaptation of technologies for older users, the perspectives of LTC professionals and caregiver associations, and gender approaches to reach underserved groups. The interviews generated qualitative insights into real-world challenges, contextual factors, and user experiences across diverse settings.

The third component centered on insights from the APEC seminar. The event convened experts, government officials, and industry representatives to review preliminary findings, share best practice examples, and test their applicability across economies. Feedback from participants informed the policy recommendations and refined the selection of best practices, ensuring that the report reflects both evidence and stakeholder perspectives.

Finally, the research developed a structured analytical framework to guide the synthesis of findings. This framework was informed by the global literature and policy reviews conducted during the desk research stage. Drawing on WHO's concepts of functional ability and intrinsic capacity, the framework was operationalized into four APEC-relevant dimensions:

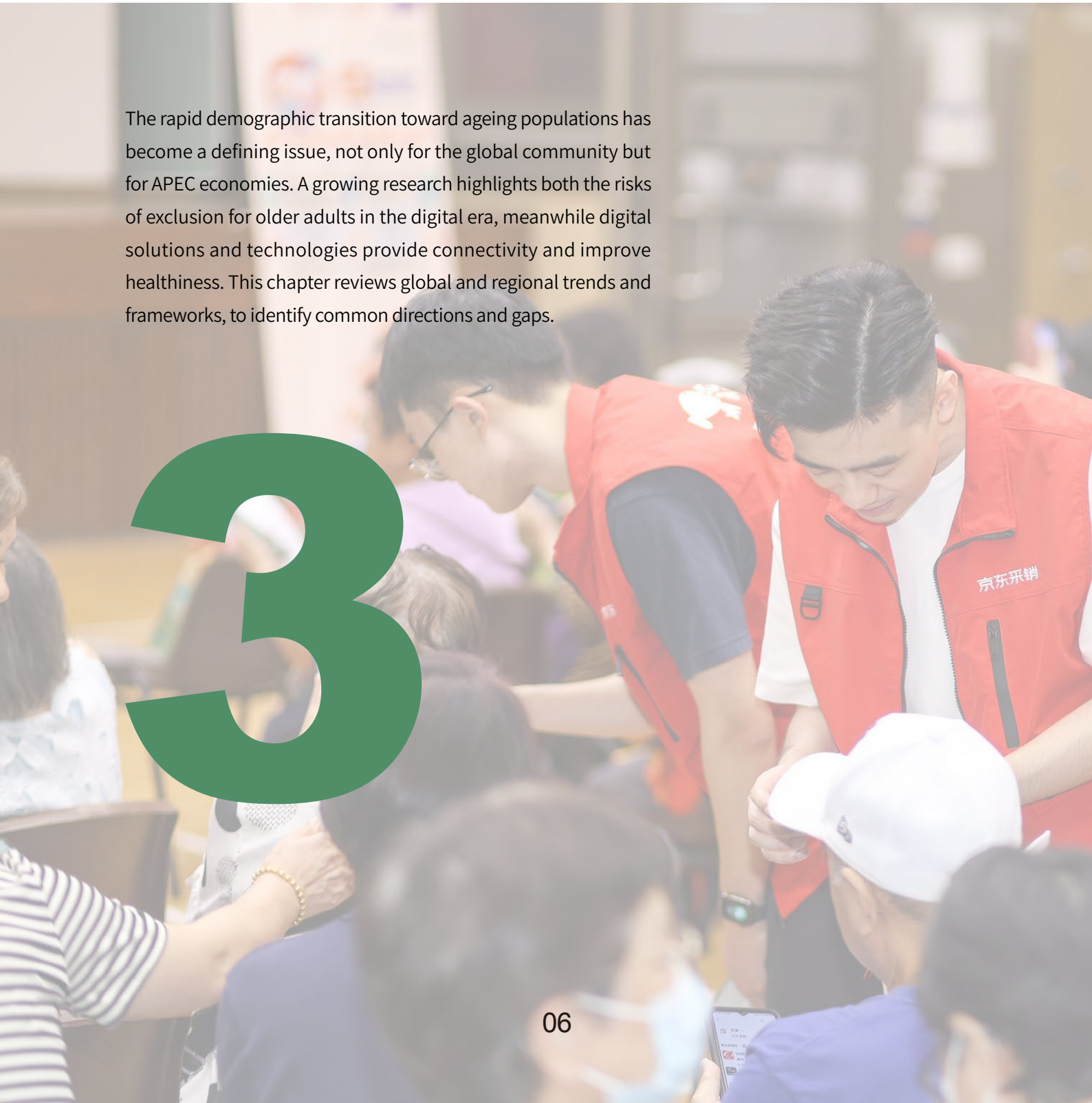
- Functional ability (Connectivity): Digital connectivity; Digital literacy and capacity building.
- Intrinsic capacity (Healthiness): Digital health solutions; LTC and caregiver support.

This framework ensured that the research not only documented individual cases but also highlighted the systemic conditions required for inclusive and sustainable digital ageing strategies in APEC.



Literature Review and Policy Landscape

The rapid demographic transition toward ageing populations has become a defining issue, not only for the global community but for APEC economies. A growing research highlights both the risks of exclusion for older adults in the digital era, meanwhile digital solutions and technologies provide connectivity and improve healthiness. This chapter reviews global and regional trends and frameworks, to identify common directions and gaps.



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3.1 Global and Regional Ageing Trends

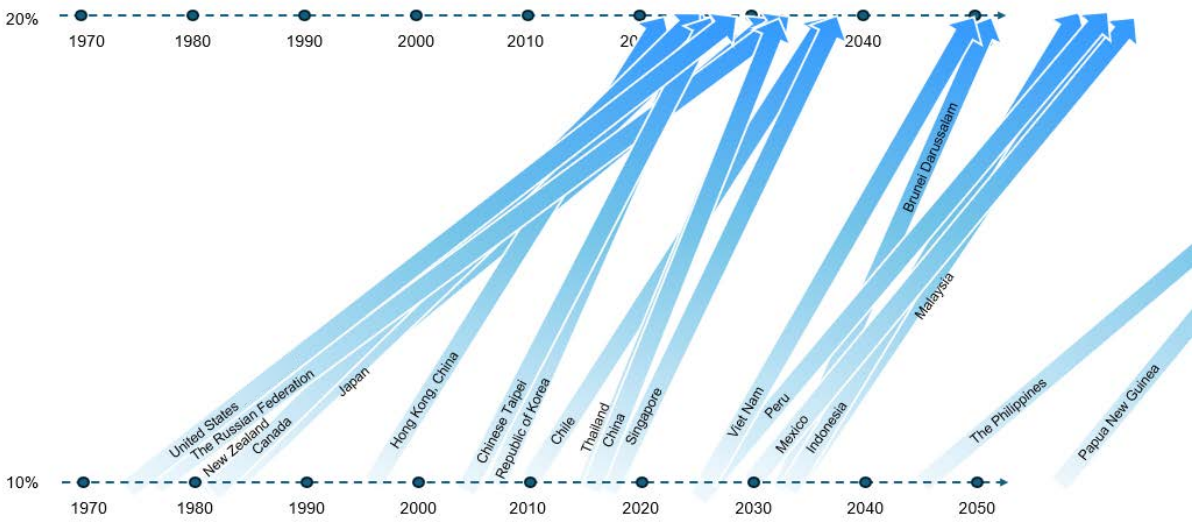
Population ageing has become a defining global trend of the 21st century. According to the United Nations World Population Prospects, the number of people aged 65 years or above reached around 830 million in 2024 and is projected to more than double to 1.6 billion in 2050 (United Nations, 2024). The share of older adults in the total population will rise from over 10 percent in 2024 to 17 percent in 2050, meaning that one in six people worldwide will be over 65.

The Asia-Pacific region has been ageing at a faster pace than most of the world. By 2040, more than half of APEC economies will have become either “aged” (14% of population 65+) or “super-aged” (20% of population 65+). Currently, several economies are already “super-aged” societies, including Hong Kong, China (22.7% in 2024, projected 37.5% in 2040); Japan (29.8% to 35.4%); and the Republic of Korea (19.3% to 33.8%). By 2040, China (from 14.7% to 31.5%) will also be in a super-aged economy. Other economies such as Chile (14.1% to 21.9%); Singapore (13.7% to 21.4%); and Thailand (15.4% to 25.6%) are on similarly status. Even younger economies like Indonesia; Malaysia; Mexico; Peru; and Viet Nam will see their elderly populations double by 2040. Papua New Guinea and the Philippines will experience a slower pace.

	2024	2040
Australia	17.73	22.3
Brunei Darussalam	6.87	14
Canada	19.8	24.41
Chile	14.14	21.85
People's Republic of China	14.67	31.53
Hong Kong, China	22.67	37.48
Indonesia	7.29	12.12
Japan	29.78	35.35
Republic of Korea	19.27	33.83
Malaysia	7.74	12.4
Mexico	8.25	13.52
New Zealand	17.2	22.69
Papua New Guinea	3.46	5.79
Peru	9.23	13.96
The Philippines	5.49	8.8
The Russian Federation	17.18	21.29
Singapore	13.66	21.44
Chinese Taipei	19.18	31.53
Thailand	15.36	25.57
United States	17.93	22.04
Viet Nam	9.05	15.75

Percentage of total population by 65+ Source: UN Population Division Data Portal

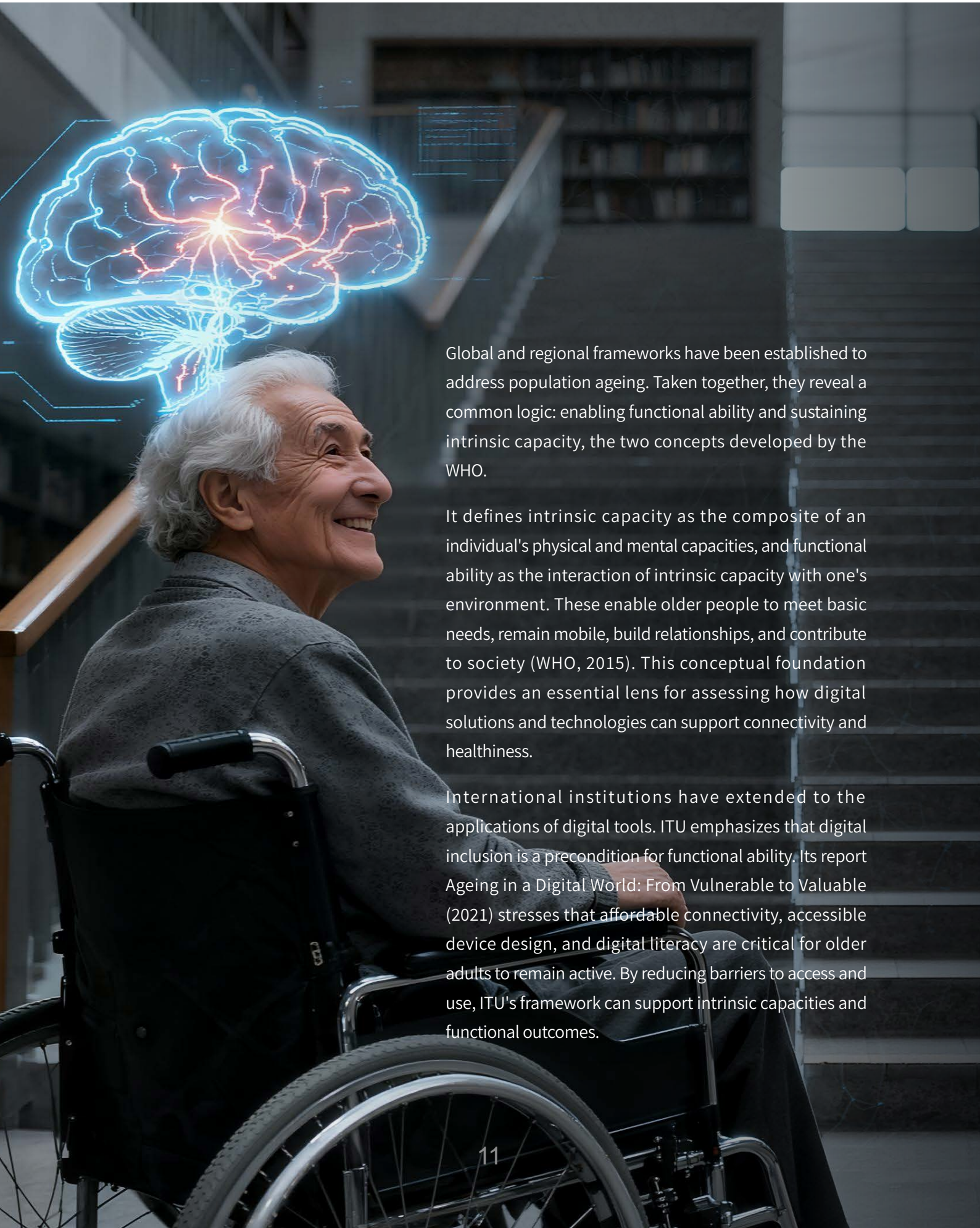
The speed of ageing in APEC is particularly striking when compared with historical experience in Europe. While European economies took more than a century to double the share of their elderly population from 10 to 20 percent, several APEC economies have undergone the same transition in less than two decades. Japan moved from an “ageing” society (10% aged 65+) in 1984 to a “super-aged” society (20%) by 2005 in just 21 years. Thailand is projected to make this transition in only 16 years (2015-2031); Republic of Korea in 17 years (2008-2025); China in a similar 17-year span (2015-2032); and Singapore in 19 years (2018-2037). By contrast, economies such as Indonesia; Malaysia; and Mexico will take around three decades.



Year of Reaching the Percentage of Each Economy	10%	20%	Years to Double (10% to 20%)
Australia	1984	2031	47
Brunei Darussalam	2033	2051	18
Canada	1984	2025	41
Chile	2010	2037	27
People's Republic of China	2015	2032	17
Hong Kong, China	1996	2022	26
Indonesia	2034	2064	30
Japan	1984	2005	21
Republic of Korea	2008	2025	17
Malaysia	2032	2058	26
Mexico	2030	2060	30
New Zealand	1982	2031	49
Papua New Guinea	2060	2100	40
Peru	2028	2057	29
The Philippines	2046	2082	36
The Russian Federation	1979	2032	53
Singapore	2018	2037	19
Chinese Taipei	2007	2025	18
Thailand	2015	2031	16
United States	1973	2029	56
Viet Nam	2027	2050	23

This demographic shift coincides directly with the APEC Putrajaya Vision 2040, which emphasizes inclusive growth and resilience. It underscores the urgent need for comprehensive strategies that combine policy, health, digital and technological innovations (APEC, 2025b; San Andres & Seah Jiaqi, 2025).

3.2 Global and Regional Frameworks



Global and regional frameworks have been established to address population ageing. Taken together, they reveal a common logic: enabling functional ability and sustaining intrinsic capacity, the two concepts developed by the WHO.

It defines intrinsic capacity as the composite of an individual's physical and mental capacities, and functional ability as the interaction of intrinsic capacity with one's environment. These enable older people to meet basic needs, remain mobile, build relationships, and contribute to society (WHO, 2015). This conceptual foundation provides an essential lens for assessing how digital solutions and technologies can support connectivity and healthiness.

International institutions have extended to the applications of digital tools. ITU emphasizes that digital inclusion is a precondition for functional ability. Its report Ageing in a Digital World: From Vulnerable to Valuable (2021) stresses that affordable connectivity, accessible device design, and digital literacy are critical for older adults to remain active. By reducing barriers to access and use, ITU's framework can support intrinsic capacities and functional outcomes.

OECD highlights the digital health and care solutions to support the intrinsic capacity. It points to the potential of telehealth, robotics, and digital platforms to sustain mobility, cognition, and vitality among older adults (OECD, 2020). At the same time, OECD warns of persistent gaps in affordability and literacy that threaten to exclude older people.

In the lens of APEC's policy agenda, APEC has begun reframing ageing as both a challenge and an opportunity (San Andres & Seah Jiaqi, 2025). Policy discussions stressed sustaining workforce participation, strengthening pension and fiscal resilience, and promoting community-based, where digital solutions and technologies can act as enablers. The digital dimension was highlighted at the APEC Telecommunications and Information Working Group (TELWG) workshop on Digital Inclusion for the Elderly (Incheon, August 2025). It emphasized that inclusion is not only about access, but about participation and dignity. Some proven practices, such as intergenerational training, user-centered service design, and AI-driven accessibility, show how technology can reduce inequality and support healthy ageing. Aligned with the Putrajaya Vision 2040, these insights underscore that digital innovation is key for turning demographic ageing into an opportunity, older adults can be contributors to inclusive growth across the region.

Other regional institutions further adapt these principles to the Asia-Pacific context. ADB stressed that older adults in informal employment often lack both social inclusion and digital access, limiting their ability to benefit from emerging technologies (ADB, 2022). Similarly, UNESCAP (2022) reported that in the region, over 60% of rural older people and elderly women remain excluded from digital services, reflecting inequalities in income, connectivity, and healthiness. These perspectives underline that both intrinsic capacity and functional ability can only be realized if digital innovations are designed and delivered inclusively.

Taken together, two requirements emerge: first, older adults must be able to connect, afford, and confidently use digital solutions and technologies in order to maintain functional ability for connectivity; second, intrinsic capacity for healthiness must be sustained through digitally and technically supported care models. These insights point to four dimensions that form the basis of this report's framework:

- Digital connectivity: Ensure older adults can access reliable and affordable digital networks and devices, creating the foundation for participation in modern societies.
- Digital literacy and capacity building: Equip older people with the skills, confidence, and support networks to use digital tools meaningfully and safely.
- Digital health solutions: Capture the potential of technology to enhance prevention, care, and health management, thereby sustaining intrinsic capacity and extending healthy life years.
- LTC and caregiver support: Highlight the role of digital ecosystems in easing caregiver burdens, coordinating services, and providing responsive support as capacities decline.

Thus, this four-dimensional framework developed into a structure APEC's policy context.

3.3 Connectivity and Functional Ability

WHO defines functional ability as the outcome of the interaction between intrinsic capacity and enabling environments (WHO, 2015). In today's digital era, functional ability increasingly depends on older adults' ability to connect to affordable, age-friendly, and supportive digital ecosystems. Among the four dimensions identified in this report, digital connectivity, digital literacy and capacity building represent the foundational layers for connectivity, including meaningful participation, social inclusion, and continued independence.

Digital Connectivity

Access to connectivity is the cornerstone of functional ability. Ensuring that such connectivity is affordable, reliable, and inclusive remains essential for enabling older adults to participate fully in digital societies. Recent global reports highlight digital infrastructure and solutions have reshaped connectivity for older populations.

The ITU's Global Connectivity Report 2022 underscored the importance of universal broadband and others in reaching underserved and rural communities, while also emphasizing the need for accessible, affordable and age-friendly ecosystems (ITU, 2022).

Complementing this, World Bank (2023a) pointed to innovations such as community digital hubs, public Wi-Fi, and cross-sector partnerships to expand inclusive access.

In APEC, economies vary in their strategies depending on infrastructure maturity, fiscal status, and demographic pressures. Some have adopted infrastructure-led strategies that embed broadband access and smart technologies into their transformation agendas. In Singapore, the Infocomm Media Development Authority' s (IMDA, 2021) Seniors Go Digital programme coupleed broadband and device subsidies with community hubs, ensuring that connectivity is not only affordable but embedded within daily life. Republic of Korea had similarly integrated connectivity into its Digital New Deal, expanding rural broadband coverage and creating digital hubs in underserved areas (Ministry of Science and ICT [MSIT], 2021). Japan's Smart Wellness City model went further by linking ICT platforms, municipal data, and broadband-enabled monitoring systems to foster health and social engagement at the city level.

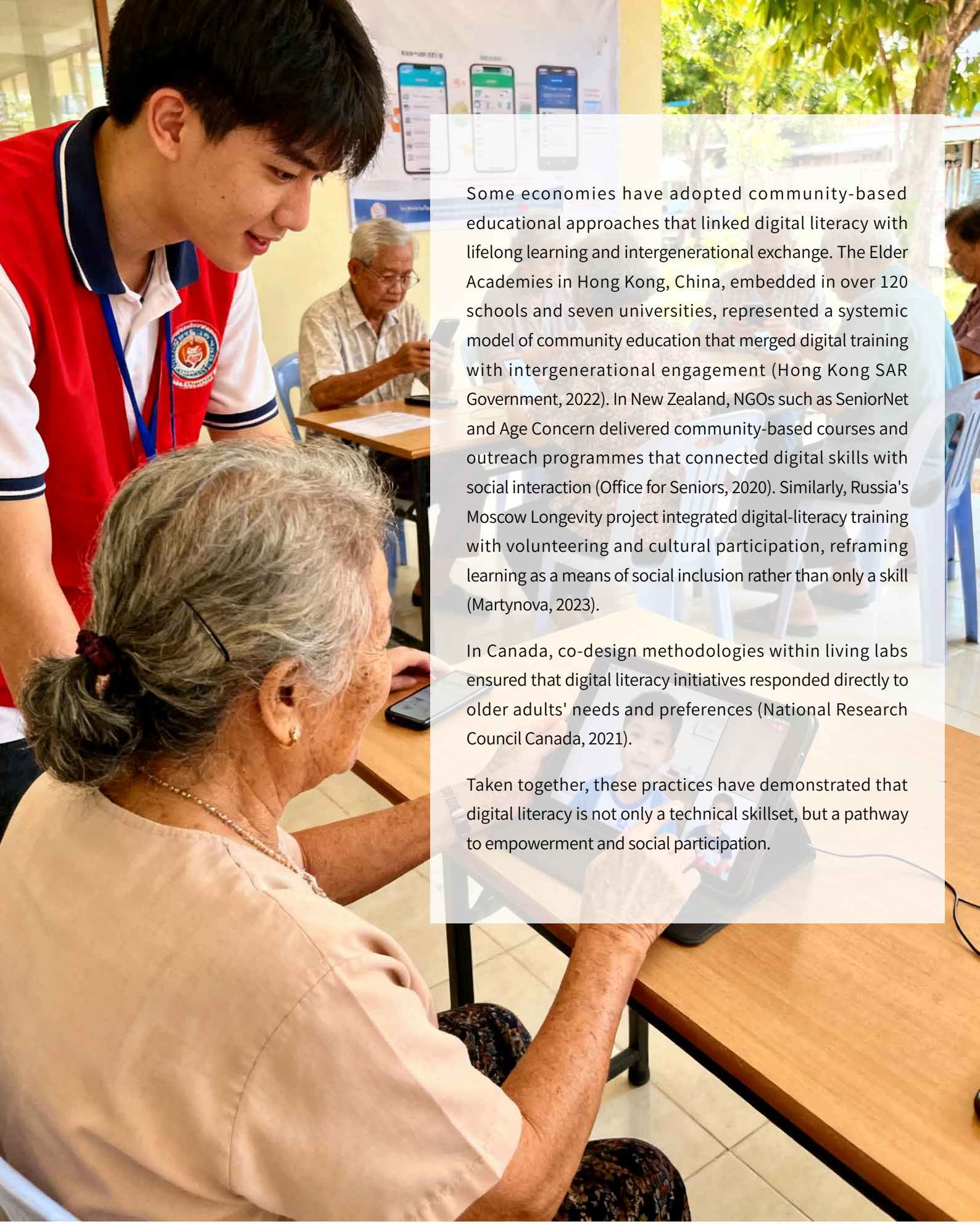
Some economies have prioritized connectivity through regulatory and community-led models. China's Ministry of Industry and Information Technology (MIIT, 2021) mandated that mobile apps shall provide an optional function "Older User Mode" for older users with minimum font sizes and simplified navigation. It can ensure digital services remain accessible. Viet Nam's National Digital Transformation Program emphasizes rural connectivity for elderly inclusion, while Chile has piloted telecentres in remote areas to reduce rural isolation. In North America, the United States has used broadband expansion initiatives and public–private partnerships to link older adults with virtual senior centres, while Canada's Aging in Place Challenge Program focuses on connectivity for indigenous and rural communities (National Research Council Canada, 2021).

In summary, across APEC economies, the different approaches share a common goal, that is ensuring that connectivity enables participation, independence, and well-being for older adults. A mix of fixed broadband, 5G, and programmes is emerging as the backbone of inclusive digital ecosystems, but connectivity alone is insufficient. Sustainable progress requires integrated policy mechanisms, affordability frameworks, and community-based service models that guarantee their connectivity and accessibility.

Digital Literacy and Capacity Building

Connectivity alone is insufficient without the skills to use technology meaningfully (ITU, 2024). Building digital literacy among older adults has therefore become a core pillar of functional ability.

Across the region, some economies have launched economy-wide campaigns and initiatives to strengthen their digital skills and participation. China's "Digital Inclusion for Older People: China Tour 2024, led by the MIIT, introduced policy outreach, digital-skills training, and service upgrades to promote age-friendly digital transformation across all provinces (MIIT, 2024). Thailand, through the National Digital Economy and Society Committee, expanded training programmes for citizens of all ages, with particular focus on the elderly, aiming to equip 1,000 older adults by 2024 and raise their digital competency by 2027 (OpenGov Asia, 2024). In Republic of Korea, 50+ Centers operating under the Ministry of Science and ICT, have functioned as digital-learning and re-skilling hubs for urban and rural older adults (MSIT, 2021).



Some economies have adopted community-based educational approaches that linked digital literacy with lifelong learning and intergenerational exchange. The Elder Academies in Hong Kong, China, embedded in over 120 schools and seven universities, represented a systemic model of community education that merged digital training with intergenerational engagement (Hong Kong SAR Government, 2022). In New Zealand, NGOs such as SeniorNet and Age Concern delivered community-based courses and outreach programmes that connected digital skills with social interaction (Office for Seniors, 2020). Similarly, Russia's Moscow Longevity project integrated digital-literacy training with volunteering and cultural participation, reframing learning as a means of social inclusion rather than only a skill (Martynova, 2023).

In Canada, co-design methodologies within living labs ensured that digital literacy initiatives responded directly to older adults' needs and preferences (National Research Council Canada, 2021).

Taken together, these practices have demonstrated that digital literacy is not only a technical skillset, but a pathway to empowerment and social participation.

3.4 Healthiness and Intrinsic Capacity

Healthiness is closely tied to sustaining the intrinsic capacity of older adults' physical and mental reserves (WHO, 2015). As populations across APEC age rapidly, economies have been increasingly turning to digital solutions and technologies to prevent functional decline, manage chronic diseases, and relieve systemic pressures on health and social care. The NIQ 2025 Global Health & Wellness Survey found that 57% of respondents now consider "ageing well" more important than five years ago, requesting digital health tools and others to enable independent and healthy ageing (NIQ, 2025).

Two policy dimensions stand out: the expansion of digital health solutions and the strengthening of LTC and caregiver support.

Digital Health Solutions

International organizations emphasize that digital health innovations extends well beyond telemedicine and electronic records, encompassing a broad ecosystem of digital solutions and technologies that can transform health systems (World Bank, 2023b; WHO, 2021b).

The World Bank's Digital-in-health report (2023b) identifies data analytics, AI applications, digitally connected devices, genomics, and remote patient monitoring as rapidly scaling solutions with strong potential to expand access and quality of care. Similarly, WHO's Global Strategy on Digital Health 2020–2025 stresses the integration of advanced computing, big data, AI, IoT, robotics, blockchain, and smart wearables into economywide health systems, enabling interoperable data exchange and more personalized, preventive, and people-centered care.

Across APEC economies, digital health has evolved to be an integral component of health and social care systems. Governments have been increasingly embedding digital health within policy and and transformation agendas, recognizing its potential to enhance efficiency and resilience.

Several economies have pursued system-level integration through comprehensive strategies. Japan launched its Healthcare DX initiative in 2022 to build a unified economy-wide health data infrastructure, standardize electronic medical records, and enable seamless data linkage across medical, pharmaceutical, and LTC sectors, aiming to improve health outcomes and system efficiency (Digital Agency, 2025). Republic of Korea's AI-IoT Healthcare Project led by its Digital New Deal, enrolled over 45,000 older adults with improvements in frailty scores and nutrition. Further, it launched a KRW 200 billion (around USD 200 million) R&D programme, fostering commercial innovation in robotics and smart home eldercare (National Health Insurance Service of the Republic of Korea [NHIS], 2023). In Australia, the Aged Care Data and Digital Strategy 2024–2029 and the Aged Care Act 2024 together established an economywide roadmap for digital record-keeping, monitoring, and person-centered care (Australian Department of Health and Aged Care, 2024).

Singapore has expanded telehealth pilots, caregiver training apps, and digital respite platforms, embedding them within its Smart Nation framework (IMDA, 2021). China's 14th Five-Year Plan on Healthy Ageing integrates geriatrics, rehabilitation, and traditional Chinese medicine with digital health, targeting 85% institutional compliance with age-friendly standards by 2025 (State Council of China, 2024).

In the United States, telehealth reimbursement expansions under Medicare and Medicaid during COVID-19 made permanent, ensuring continuity of access (Centers for Medicare & Medicaid Services [CMS], 2022). Canada's AgeTech Innovation Hubs emphasized co-design with older adults, producing living labs that test telehealth, fall detection, and caregiver support solutions (National Research Council Canada, 2021).

These perspectives underscore that the frontier of digital health lies in combining multiple technologies

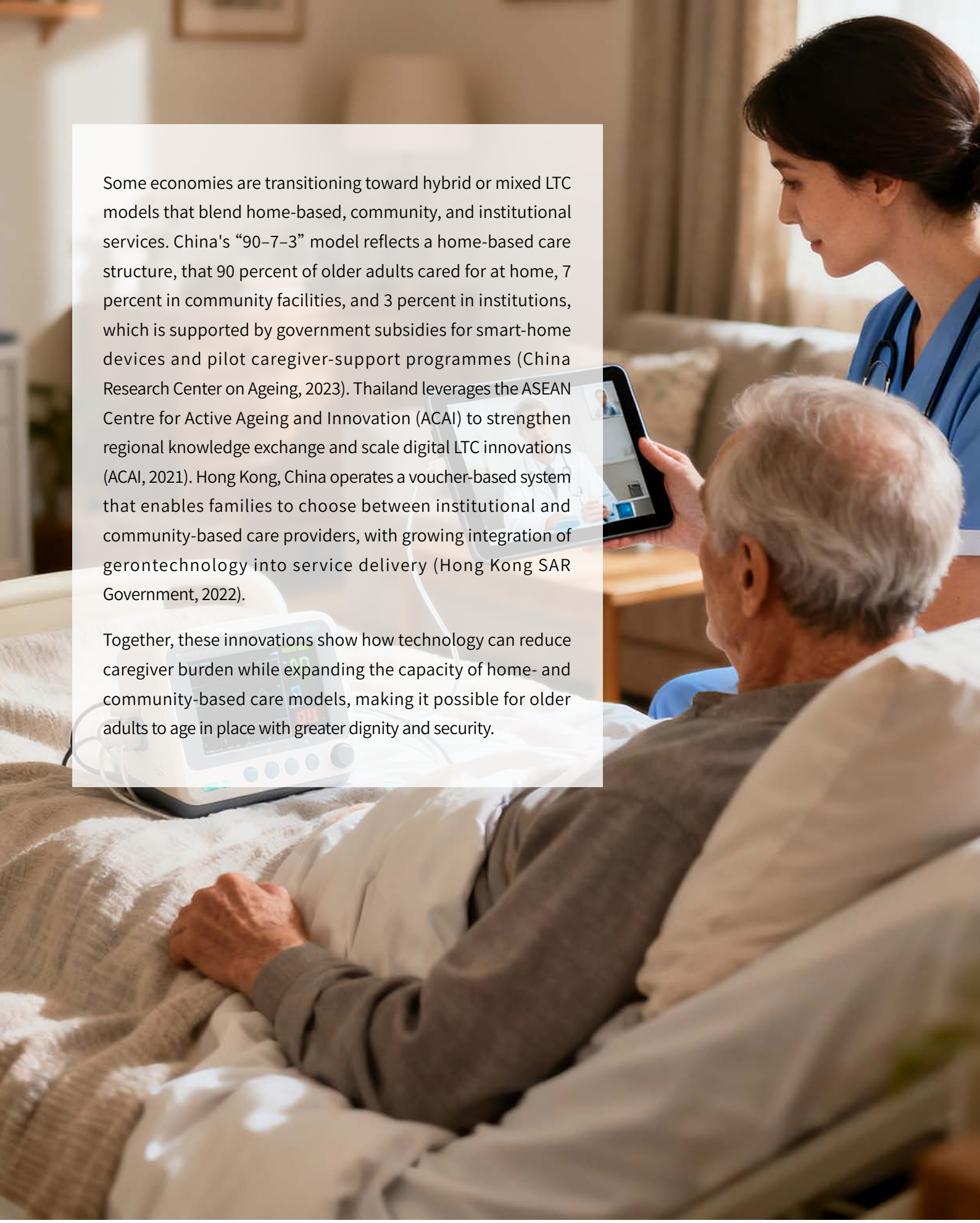
to strengthen system resilience, improve diagnostic accuracy, and ensure continuity of care among older adults. However, disparities persist. Economies with limited financing or workforce capacity struggle to integrate these innovations into their agenda, risking fragmentation and inequality.

Long-Term Care and Caregiver Support

The fourth policy dimension focuses on LTC and the role of caregivers. APEC economies vary significantly between those with formal LTC systems and those relying primarily on family- or community-based models.

Recent advances in digital solutions and technologies have increasingly been applied to support LTC systems and caregivers. These innovations range from ambient assisted living technologies such as wearable health monitors and fall-detection devices, to more integrated hospital-at-home programmes and supportive robotics (Molinsky, Scheckler, & Hu, 2023). Research highlights that these tools not only enhance the independence and safety of older adults, but also help reduce caregiver strain by enabling real-time health monitoring, medication management, and emergency response alerts (Connect America, 2023). In addition, digital coordination platforms and AI-enabled care companions are emerging to streamline communication among family members, healthcare professionals, and social workers, ensuring updated and accessible across networks (Lee et al., 2024).

Among APEC economies, Japan and Republic of Korea have established comprehensive LTC insurance systems that finance both traditional services and digital technologies, including robotics and remote monitoring, to address workforce shortages (WHO, 2017). Japan's Ministry of Economy, Trade and Industry (METI) and Ministry of Health, Labour and Welfare (MHLW) expanded the use of robots, ICT, and IoT in enhancing care quality, easing caregiver burdens, and supporting the self-reliance of older adults (METI & MHLW, 2024). Republic of Korea has integrated smart-care and remote-monitoring tools within its economy-wide LTC and community health framework, complemented by workforce training and R&D programmes on assistive robotics. Singapore's Ministry of Social and Family Development (MSF, 2021) has piloted digital respite platforms and caregiver training apps, enabling families to access flexible support while remaining the core providers of eldercare.



Some economies are transitioning toward hybrid or mixed LTC models that blend home-based, community, and institutional services. China's “90–7–3” model reflects a home-based care structure, that 90 percent of older adults cared for at home, 7 percent in community facilities, and 3 percent in institutions, which is supported by government subsidies for smart-home devices and pilot caregiver-support programmes (China Research Center on Ageing, 2023). Thailand leverages the ASEAN Centre for Active Ageing and Innovation (ACAI) to strengthen regional knowledge exchange and scale digital LTC innovations (ACAI, 2021). Hong Kong, China operates a voucher-based system that enables families to choose between institutional and community-based care providers, with growing integration of gerontechnology into service delivery (Hong Kong SAR Government, 2022).

Together, these innovations show how technology can reduce caregiver burden while expanding the capacity of home- and community-based care models, making it possible for older adults to age in place with greater dignity and security.

3.5 Synthesis and Gaps

The demographic pressures and the conceptual frameworks together underscore a challenge: the region must enable functional ability and sustain intrinsic capacity for rapidly growing elderly populations, and it must do so within compressed timeframes of demographic transition. While international frameworks (WHO, 2015; ITU, 2021; OECD, 2020a; ADB, 2022; ESCAP, 2022) provide strong guidance, the policy landscape across APEC reveals uneven translation into practice.

A synthesis across the four dimensions points to both encouraging progress and persistent gaps:

- Connectivity as a precondition. Most APEC economies now recognize digital inclusion as a prerequisite for sustaining functional ability for connectivity. Investments in broadband expansion, device subsidies, and regulatory standards, such as China's ageing-friendly app requirements (MIIT, 2021) and the Action Plan for the Development of Smart Health and Elderly Care Industry (2021–2025), have been gradually improving accessibility and usability. Yet affordability, accessibility, and last-mile inclusion remain uneven, especially for older adults with limited mobility or income. Bridging this divide requires people-centered and age-friendly digital environments, where interfaces, applications, and smart devices are accessible and responsive to older adults' everyday needs.
- Digital literacy as an enabler. Training initiatives including Singapore's Seniors Go Digital, Korea's 50+ Centers, and Hong Kong, China's Elder Academies, reflect a shared recognition that connectivity must be matched by capability. However, participation rates remain low among disadvantaged older adults, and many programmes remain short-term or urban-centred. Moving forward, sustained, community-based learning ecosystems are needed to ensure that older people can not only access technology, but use it confidently, paving the way for later interventions that leverage intergenerational learning, volunteer engagement, and social inclusion.

- Digital health as a catalyst. OECD (2020b) and WHO (2015) underscore the transformative potential of telehealth, AI, and robotics in sustaining intrinsic capacity for healthiness. APEC economies such as Japan and Republic of Korea have integrated these tools into health-financing frameworks through LTC insurance, while Australia and Singapore have embed telehealth and digital respite into ageing strategies (IMDA, 2021; Department of Health and Aged Care, 2024). Yet some economies with limited interoperability, fragmented governance, and cautious regulation continue to face challenges in adoption.

- LTC and caregiver support as the pillar. WHO (2017) emphasizes that LTC sustainability requires formal systems and workforce support. Japan and Republic of Korea, with mature LTC insurance systems, lead in adopting robotics and monitoring tools to offset workforce shortages. China and Singapore have piloted digital caregiver training and respite services, while care technologies such as remote monitoring platforms, and AI fall-detection systems are helping families manage daily burdens (Molinsky, 2023; Connect America, 2024). Nevertheless, many APEC economies still rely heavily on family-based care with limited institutional support. Bridging this gap calls for inclusive care ecosystems that leverage digital platforms and assistive technologies to coordinate care, reduce workload, and provide practical support. As more AI-enabled and sensor-based care systems emerge, ensuring they are accessible and trusted will be crucial for promoting dignity and enabling ageing in place.

Overall, APEC economies converge in recognizing that digital solutions and technology are indispensable for ageing policy, but diverging in the depth of integration and inclusiveness.

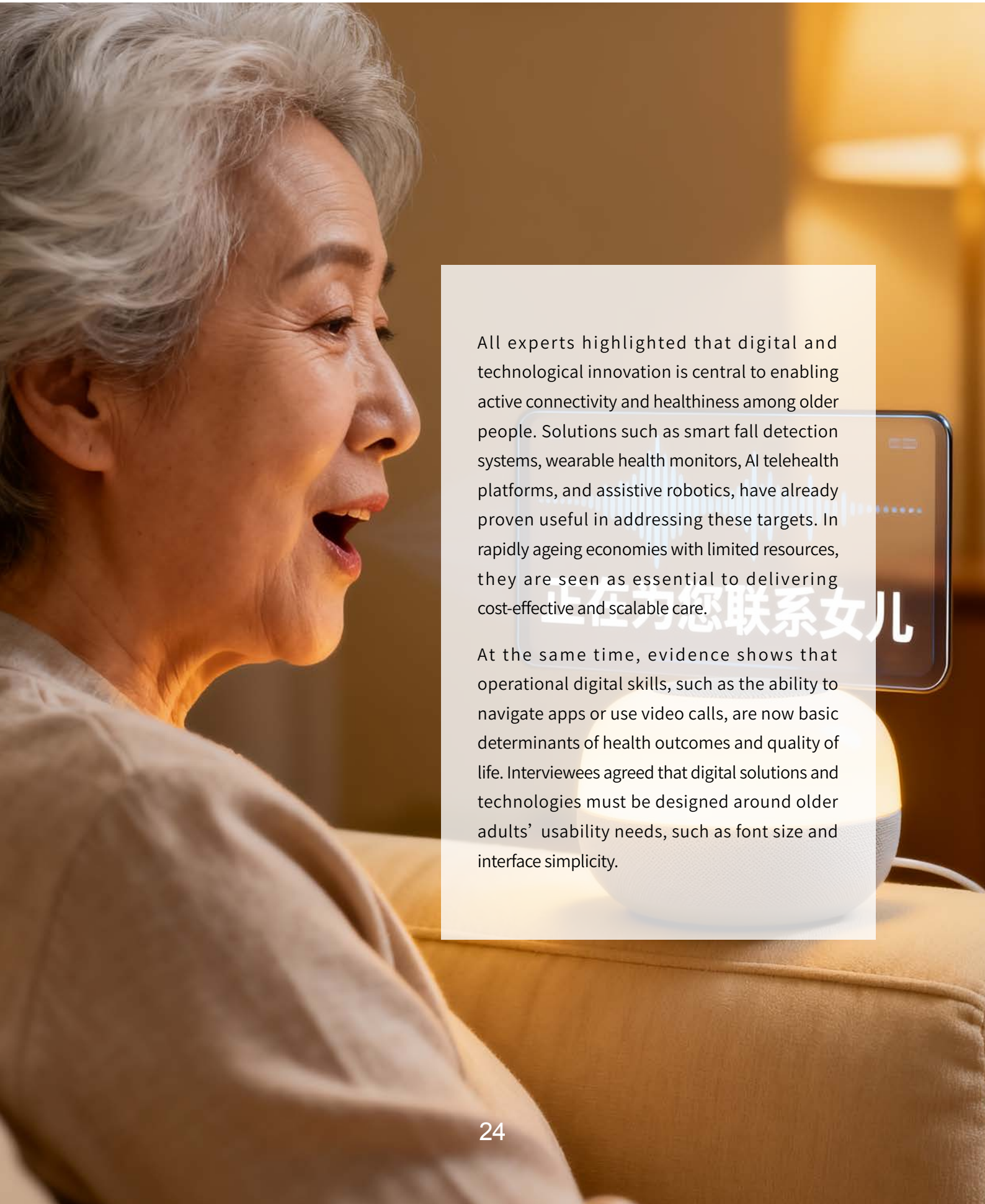
These findings reaffirm APEC's policy discourse: calling for our collective response through holistic and inter-generational policies, reflected in the 2025 APEC Leaders' Gyeongju Declaration (APEC, 2025c).

Interview Findings

This chapter synthesizes insights from eleven experts across nine APEC economies, representing academia, governments, international organizations, and solution providers. Their perspectives converge around the four analytical dimensions of digital and technological empowerment for older adults.

4

4.1 Digital Solutions and Technologies for Connectivity and Healthiness



All experts highlighted that digital and technological innovation is central to enabling active connectivity and healthiness among older people. Solutions such as smart fall detection systems, wearable health monitors, AI telehealth platforms, and assistive robotics, have already proven useful in addressing these targets. In rapidly ageing economies with limited resources, they are seen as essential to delivering cost-effective and scalable care.

At the same time, evidence shows that operational digital skills, such as the ability to navigate apps or use video calls, are now basic determinants of health outcomes and quality of life. Interviewees agreed that digital solutions and technologies must be designed around older adults' usability needs, such as font size and interface simplicity.

4.2 Connectivity and Affordability Barriers

Across APEC economies, a digital divide continues to affect older adults, even in urban areas where infrastructure is relatively advanced. Many older people, particularly those living alone, in older neighbourhoods, or with limited education, still face barriers to accessing affordable devices, internet connectivity, and training programmes. These inequalities are even more deepen further in rural and remote communities, where broadband coverage remains limited and device costs are higher.

Even where devices are available, ongoing data costs can be prohibitive for low-income older people. Interviewees warned that without targeted policies, such as subsidies, affordable broadband, and community-level outreach, the digital divide may widen further for them.

4.3 Digital Literacy and Confidence-Building

A recurrent theme was that digital literacy remains the primary bottleneck. Across Australia; Hong Kong, China; Indonesia; Japan; Malaysia; New Zealand; the Philippines; Thailand; and Viet Nam, governments and NGOs have launched programmes to build older adults' capacity to use mobile devices, e-payment tools, and government apps. Successful models have combined small-class training with intergenerational learning. More importantly, peer-to-peer approaches and community-based organizations play central roles.

These approaches help build trust, normalize trial-and-error, and foster self-efficacy, which are critical for long-term engagement. Interviewees stressed that without confidence-building and ongoing support, even affordable devices and apps may remain unused.

4.4 Digital Health Solutions and System Integration

Case examples from Australia; Indonesia; Japan; New Zealand; the Philippines; and Thailand, illustrate the growing use of telemedicine, e-health records, AI-enabled monitoring systems, and robotics in addressing older adults' health needs. Experts observed that these technologies hold strong promise for preventive care, early diagnosis, and continuity of services, particularly where traditional health-care capacity is limited.

Despite growing optimism, interviewees identified several barriers that continue to constrain the effective engagement of digital health solutions. High device and service costs restrict access for low-income older adults. In addition, low digital literacy and limited professional training reduce confidence among both users and providers. Without coordinated institutional frameworks and sustainable financing, many promising technologies risk remaining pilot-level initiatives rather than scalable solutions.

Furthermore, system interoperability remains a major challenge. Hospital and clinic platforms often operate in isolation, preventing seamless patient-data exchange and coordinated follow-up. Interviewees emphasized the need for integration across public and private systems to ensure continuity of care and reduce duplication.

Some economies have piloted economy-wide health data platforms, while others rely on community-level volunteers and apps to gather and report health indicators. Both approaches point to the need for standardized frameworks and cross-sector collaboration to ensure continuity of care and avoid policy–practice gaps.

4.5 LTC and Caregiver Support and Community-Based Approaches

Across the region, caregivers including professional and family, remain indispensable in enabling older adults to benefit from digital solutions. Interviewees repeatedly emphasized that LTC capacity is one of the weakest links in ageing policy. While demand for care is rising sharply, workforce shortages, insufficient technology support, and limited training continue to constrain service quality. Several experts noted that caregivers themselves are ageing, underscoring the urgency of digital solutions and technologies that can reduce physical strain and improve efficiency.

Overall, these approaches illustrate that LTC sustainability depends not only on infrastructure and funding but also on empowering caregivers.

4.6 Conclusion

Taken together, the interviews revealed a strong consensus that digital solutions and technologies are no longer optional, but essential for addressing the twin pressures of rapid demographic ageing and constrained resources.

At the same time, they highlight a common set of cross-cutting barriers: the connectivity and affordability of devices; persistent urban–rural divides; limited digital literacy and confidence; fragmented health and care systems; and continuing professional LTC workforce shortages.

Emerging directions across APEC economies suggest four key priorities:

- First, digital and technological empowerment must be mainstreamed into both health and technology policies under the APEC agenda.
- Second, peer-to-peer and community-based models of capacity building have shown particular promise for building confidence and sustainability.
- Third, collaboration between government, private sector, and civil society, including affordable service packages, CSR-supported training, and community-based clubs, that can align incentives and extend reach.
- Finally, regional cooperation on digital solutions and technologies, particularly in AI, robotics and others are important to address this challenge. They can launch pilots, sandboxes, and city-level partnerships, enabling less advanced economies adapting proven models to their local context.

In short, digital and technological empowerment for older adults in APEC requires more than deploying new digital solutions and technologies. It demands integrated system, integrated governance, sustained investment in affordability and literacy, and a regional collaboration to address this demographic transition.

Best Practices

The previous chapters showed that APEC economies have made progress in advancing digital and technological empowerment.

At the same time, gaps persist in affordability and last-mile connectivity, disparities in digital literacy, and uneven adoption of digital health and caregiving innovations. These challenges highlight the continuing need for innovative, scalable, inclusive, and technology-driven solutions that can sustain functional ability and intrinsic capacity among older adults.

Building on this foundation, this chapter showcases best practices from APEC economies that demonstrate how digital solutions and technologies can address these barriers and enhance the connectivity and healthiness of older adults.

To ensure coherence, the best practices are organized according to the four dimensions of the analytical framework: digital connectivity, digital literacy and capacity building, digital health solutions, and LTC and caregiver support. This structure allows each case to be viewed not as an isolated initiative, but as part of an integrated system.

5

5.1 Digital Connectivity

5.1.1 Mobile App Age-Friendly Adaptation (China)

Background

In China, smartphones have become the central platform for daily living, covering payments, social interaction, transportation, healthcare, and public services. Yet older adults often struggled with their complexity. A 2022 survey by the China Internet Network Information Center (CNNIC) found that 11.3 percent of internet users were 60 years or above, but many faced barriers such as small fonts, cluttered interfaces, low color contrast, and hidden functions. For older people, basic tasks like scanning a health code, booking a hospital appointment, or making payments became stressful, exacerbating the digital divide during the COVID-19 pandemic (Ding, 2021).

Solution

To address these issues, the MIIT launched the "Special Action on Age-Friendly and Accessibility Transformation of Internet Applications" in 2021. It launched the General Design Specification for Age-Friendly Mobile Internet Applications (Apps), mandating technical requirements for app developers.

Key design standards included:

- **Font size and spacing:** Main interface text must be scalable, with elder modes providing at least 18 pt font and up to 30 pt for primary functions; line spacing must be at least 1.3 times text height.
- **Contrast:** Text and icons must meet a minimum contrast ratio of 4.5:1 (or 3:1 for large fonts).
- **Clickable areas:** Primary interface buttons must be at least 60 × 60 dp, ensuring usability for older adults with reduced dexterity.
- **Navigation and feedback:** No more than three steps should be required to access core functions; feedback must be provided for gestures, and apps should avoid complex multi-finger operations.
- **Accessibility:** Age-friendly versions must provide prominent entry points labeled as "Older User Mode" or synonyms such as "Care Mode," searchable within app settings.
- **Security and privacy:** Advertising pop-ups, inducement buttons (e.g., misleading downloads or payments), and unnecessary personal data collection were strictly prohibited.

Outcomes

The retrofits delivered clear benefits. By June 2025, MIIT reported that over 3,000 apps and websites had completed upgrades, including finance, healthcare, transport, social media, and utilities (MIIT, 2025). Popular platforms such as Alipay, WeChat, and government service portals added dedicated “Older User Mode” options for older adults to choose, featuring simplified menus, enlarged buttons, one-click functions (e.g., payments, taxi booking), and optional voice input.

Furthermore, older adults reported improved confidence and independence. A 73-year-old resident shared that after activating elder modes, he could manage over 20 apps independently, from paying bills to grocery shopping. What’ s more, community training initiatives reinforced the technical advancement.

Key Takeaways

China's mobile app adaptation initiative illustrates how economywide standards and community training can improve digital inclusion for older adults. By codifying detailed requirements, China established a replicable model of age-friendly app design. The combination of policy-driven specifications and local training support ensured not only that apps were technically accessible, but also that older adults could use them in daily life.

General Mode (Didi Ride-Hailing)

Older User Mode (Didi Ride-Hailing)

5.1.2 Raku-Raku Smartphone by NTT Docomo (Japan)

Background

Japan is one of the world's most aged economies, with nearly 30% of its population over 65 in 2024. While internet and smartphone penetration is high in Japan, many older adults have been slow to adopt smartphones due to usability challenges such as small fonts, complex interfaces, and the fear of making mistakes.

Recognizing that connectivity begins with accessible devices, NTT Docomo, one of Japan's largest telecom operators, introduced the Raku-Raku Smartphone series. The initiative reflects Japan's broader strategy of combining digital infrastructure with age-focused design to promote digital inclusion.

Solution

The Raku-Raku Smartphone is a customized mobile device designed specifically for older adults. Unlike standard smartphones, it features:

- Large fonts and icons for readability.
- Simplified interface, reducing clutter and focusing on core functions like calls, messaging, photos, and payments.
- Voice input to ease text entry for users with limited dexterity.
- A built-in “Easy Learning Mode”, which guides older adults step-by-step on how to make calls, send messages, or use online payment functions.
- Integration with the “Raku-Raku Community” , an online forum that allows older adults to interact, ask questions, and share experiences in a safe environment.

Outcomes

The Raku-Raku Smartphone has become one of the most successful age-focused devices, with millions of units sold since its launch. These features directly address common barriers, such as vision, dexterity, and confidence, making digital participation accessible and less intimidating.

Beyond functional use, the device has helped older adults embrace digital payments, e-health applications, and social media, enhancing independence and reducing social isolation. The built-in learning tutorials and peer-based Raku-Raku Community also foster self-reliance and peer support, reducing dependence on family for tech help.

Key Takeaways

The Raku-Raku Smartphone illustrates how device design itself can act as a literacy tool, teaching older adults while providing functionality. For APEC economies, it highlights the importance of embedding accessibility into hardware and software. Age-friendly devices not only increase connectivity but also build confidence, enabling older people to participate fully in digital society.

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5.1.3 CLOVA CareCall by Naver (Republic of Korea)

Background

Republic of Korea is rapidly entering a super-aged society, with more than 20% of its population aged 65+ by 2024. Older people living alone, especially in rural and fishing villages, face heightened risks of social isolation, depression, and unattended health emergencies. Many older adults are not confident using smartphones or internet services, creating barriers to digital inclusion.

To address this, Naver, one of the economy's largest ICT companies, launched CLOVA CareCall, an AI-driven voice service designed to check in on older adults through regular phone calls.

Solution

CLOVA CareCall uses AI natural language processing (NLP) to make daily phone calls to older adults living alone. The system proactively asks simple, conversational questions such as whether the older adult has eaten, taken medicine, or feels unwell. The AI is capable of recognizing emotional cues in the older people's voice, detecting distress, and escalating alerts to caregivers or local support services when needed.

The service has been piloted with the Korea Rural Community Corporation in farming and fishing villages. Unlike app-based services, CLOVA CareCall requires no smartphone or internet literacy. It requests only a landline or mobile phone connection, making it accessible for even the most digitally excluded older adults.

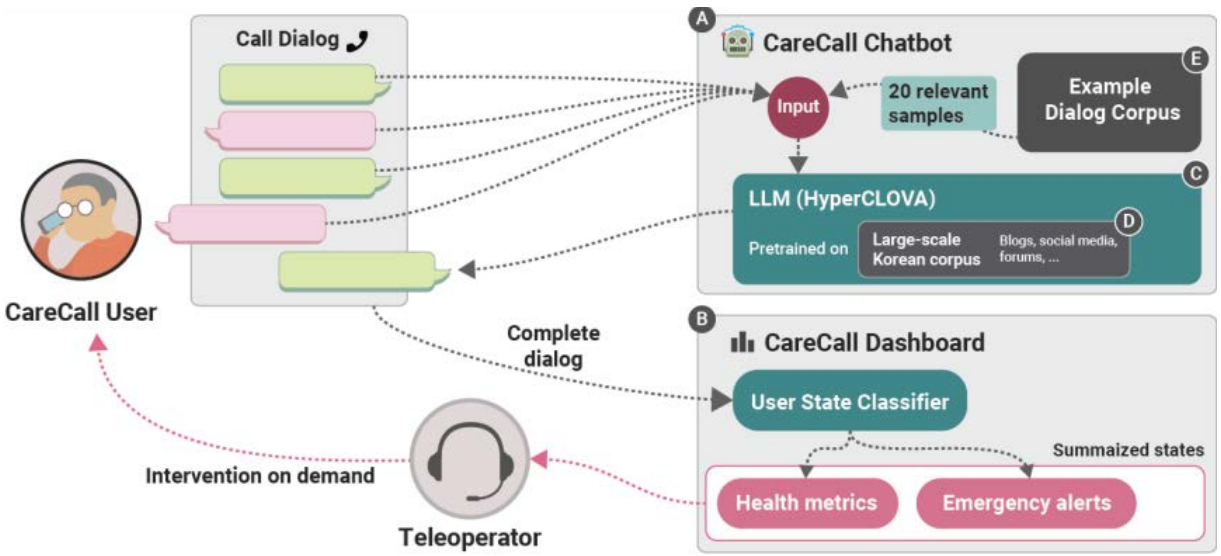
Beyond care check-ins, Naver integrates the service with its broader Clova AI platform, enabling potential expansion into reminders (e.g., medication, appointments), mental health monitoring, and linkage with local government welfare hotlines.

Outcomes

- **Accessibility:** Provides a digital bridge for older adults who lack smartphones or digital literacy, particularly in rural communities.
- **Wellbeing:** Early pilots show improved emotional reassurance and reduced loneliness among participants, who report comfort in receiving regular, human-like conversations.
- **Caregiver support:** Families and local welfare offices receive notifications if an older adult is unresponsive or shows signs of distress, allowing faster intervention.
- **Scalability:** With Korea's high telecom penetration, the service can be expanded economy-wide and integrated with government ageing policies.

Key Takeaways

CLOVA CareCall illustrates how AI voice technology can extend digital connectivity to the most vulnerable older adults. By providing proactive, human-like contact through a familiar medium (phone calls), it addresses both emotional and practical needs. For APEC economies, this model demonstrates the potential of AI-enabled voice services to strengthen community care systems, reduce loneliness, and create an inclusive pathway into digital ageing services without requiring advanced digital skills.



5.1.4 ElliQ – AI Companion Robot (United States)

Background

Social isolation is one of the most significant challenges facing older adults, particularly those living independently. In the United States, according to the University of Michigan National Poll on Healthy Aging, 1 in 3 older adults reported feeling isolated, with loneliness strongly linked to higher risks of cognitive decline, depression, and chronic disease. Traditional digital tools like smartphones and tablets, often fail to fully meet older adults' needs due to usability barriers or lack of proactive engagement.

To address this, Intuition Robotics developed ElliQ, an AI-powered companion robot designed specifically for older adults.

Solution

ElliQ is a proactive, tabletop robot that blends companionship, health support, and digital connectivity into a single platform. Unlike traditional devices that wait for user input, ElliQ engages older adults in natural conversation, offering prompts, reminders, and encouragement. Its core features include:

- **Conversational AI:** Engage older adults in small talk, wellness check-ins, and cognitive stimulation.
- **Health support:** Provide medication reminders, hydration prompts, and suggestions for light physical activity.
- **Digital communication:** Simplify video calls, messaging, and photo sharing with family, fostering stronger connections.
- **Entertainment and engagement:** Play music, audiobooks, trivia, and guided relaxation activities.
- **Caregiver integration:** Through the ElliQ Caregiver App, families and care providers receive regular updates on older adults' mood, activity, and engagement.
- **Privacy is designed into the system:** ElliQ does not use a camera for constant monitoring, instead relying on voice and movement sensors, making it more acceptable to older users wary of surveillance.

Outcomes

ElliQ has been deployed across older people living communities and in “ageing in place” initiatives in the United States Early pilots, including partnerships with the New York State Office for the Aging (NYSOFA), showed measurable benefits:

- Older adults using ElliQ reported higher levels of engagement and reduced loneliness compared with peers without the device.
- Medication adherence and health routines improved due to proactive reminders.
- Families and caregivers reported greater peace of mind, supported by regular updates on their loved ones’ wellbeing.

Key Takeaways

ElliQ demonstrates how AI can transform digital connectivity into a two-way, proactive relationship for older people. By combining companionship, health monitoring, and family communication in an accessible format, it overcomes barriers that conventional devices cannot. For APEC economies, ElliQ highlights the potential of AI-enabled, human-centric design to support ageing in place, reduce caregiver burden, and strengthen intergenerational connections.

5.2 Digital Literacy and Capacity Building

5.2.1 Smart Silver Digital Inclusion Programme for Elders, by The Federation of New Territories Youth Foundation Limited (Hong Kong, China)

Background

Hong Kong, China is experiencing rapid population ageing: by 2046, 36% of the city's residents will be aged 65 or above. Yet older adults particularly those living alone in public housing estates or subdivided flats, face a widening digital divide. With government services, health systems, and even transport moving online, many older people struggle to access essential resources, raising risks of social isolation, fraud victimization, and poverty.

Recognizing this, The Federation of New Territories Youth Foundation Limited (NTYF) launched the Smart Silver Digital Inclusion Programme for Elders in December 2024, aiming to benefit over 15,000 older adults in two years.

Solution

The project focuses on Kwai Tsing and Tsuen Wan districts, with high proportions of older residents in low-income or public housing households. The curriculum focused on practical apps that support older adults' daily lives, including medical platforms like HA Go and eHealth, government access through iAM Smart, anti-fraud tools, transport apps for buses and the MTR, and the Octopus payment system. Training also covered communication and social media (WhatsApp, WeChat, Facebook, Instagram) alongside smartphone basics such as alarms, photo-taking, and accessibility features. Lessons were delivered in simple, step-by-step formats tailored to the learning pace of older adults.

Its model combines fixed support points, outreach services, and cross-sector partnerships:

- **Community support stations:** Four fixed community points offering scheduled digital training and technical support for people aged 60+.
- **Partnership with District Councillors:** Collaboration with 41 councillors to open support corners in their offices (weekly, 2-hour sessions) and run training courses (minimum once every two months).
- **Mobile outreach and home visits:** In partnership with 27 Care Team, mobile digital stations and quarterly home visits bring support directly to vulnerable older adults.
- **Targeted training:** Small class sizes (5–10 participants) focusing on practical skills and user-friendly teaching materials (clean slides, simplified instructions).

Outcomes

By July 2025, the programme had already reached 5,300 older adults, demonstrating how community-based digital inclusion can transform ageing in disadvantaged areas:

- **Accessibility:** Reach older adults in subdivided units and public estates who are least likely to access formal training.
- **Confidence building:** Reduce psychological resistance and fear of "making mistakes" with technology, a common barrier.
- **Health access:** Wider adoption of apps such as HA Go and eHealth improved older adults' ability to manage medical records and appointments digitally, reducing barriers to healthcare.
- **Fraud prevention:** Training in the Cyberdefender app and scam-awareness strategies enhanced older adults' resilience against digital scams.
- **Intergenerational engagement:** Involve youth volunteers and even older adults themselves as peer supporters, fostering empathy and long-term community support networks.
- **Social participation:** Enable older adults to better access government e-services, health consultations, and maintain communication with family.

Key Takeaways

The programme highlights how multi-layered community engagement, government support, and intergenerational collaboration can effectively bridge the digital divide for older adults. By bringing training into the everyday environments of vulnerable older residents and pairing it with outreach and home visits, the programme has created a replicable model for APEC economies seeking to promote digital equality.

5.2.2 Seniors Go Digital Programme (Singapore)

Background

Singapore is a global leader in digital transformation, but the pace of change has raised concerns that older adults may be left behind. Many older people lacked smartphones, affordable mobile plans, or the confidence to use digital services.

In June 2020, the IMDA, a statutory board under Singapore's Ministry of Digital Development and Information, established the SG Digital Office (SDO) to accelerate digital adoption and ensure an inclusive society where every resident, regardless of age, can participate fully in the digital economy. One of its flagship initiatives is the Seniors Go Digital (SGD) programme, designed to equip older people with essential digital skills, build confidence, and address affordability barriers.

The programme is anchored in Singapore's Digital Skills for Life (DSL) framework, which outlines five competencies for everyday digital participation: setting up and using smart devices, exploring information online, communicating online, transacting online, and being safe, smart, and kind online.

Solution

The Seniors Go Digital programme combines policy-level interventions with community-based training to address both access and literacy:

- **Digital ambassadors programme:** About 1,000 Digital Ambassadors, comprising full-time staff and volunteers, are deployed island-wide to provide one-on-one guidance for older people. By visiting homes, markets, and coffee shops, they have supported more than 100,000 older adults in acquiring digital skills, from using QR-code payments to accessing e-government services. The ambassadors also worked with over 18,000 hawkers and small merchants, helping them adopt unified e-payments that benefit older adults in their daily transactions.
- **SG digital community hubs:** More than 30 hubs have been set up in community clubs and public libraries, acting as “digital shelters” where older adults can learn at their own pace in a safe and welcoming environment. At these hubs, older adults receive one-on-one coaching, participate in small group classes, and access follow-up materials. The hubs provide continuity and reassurance, making learning sustainable rather than a one-off experience.
- **Affordable connectivity packages:** In partnership with telecom operators, the programme introduced special age-friendly phone and data plans. Eligible older adults could purchase an entry-level smartphone for just SGD 20 (around USD 20), and access 5GB of mobile data for SGD 5 (around USD 4) per month. This ensured that financial constraints would not prevent older adults from staying digitally connected.

- **Structured learning pathways:** Training is aligned with the DSL framework, covering e-payments, telehealth, communication apps, and online safety. Older adults can learn via hubs, group "Learning Journeys," and multilingual online resources available in English, Mandarin, Malay, and Tamil.

Outcomes

By March 2023, more than 210,000 older people had directly benefited from the programme. Surveys indicate significant behavioural change: the share of older adults using e-payments more than doubled, from 38% in 2018 to 78% in 2022, while adoption of e-government services and communication apps also increased. The affordable connectivity scheme proved particularly effective in bridging the access gap for low-income older adults.

The combination of subsidies, ambassadors, and community hubs has also fostered greater confidence and security among older people. Training in cybersecurity and scam avoidance has improved resilience against online fraud, while personalised guidance has reduced psychological barriers such as fear of making mistakes.

Key Takeaways

Singapore's Seniors Go Digital programme illustrates how an economywide approach integrating financial subsidies, personalised guidance, and structured competency frameworks, can accelerate digital inclusion among older adults. Its success lies in addressing both infrastructure access and digital literacy.

5.2.3 Viet Nam's Intergenerational Self-Help Clubs (Viet Nam)

Background

Viet Nam is experiencing fast demographic transitions. This rapid ageing process is outpacing economic growth, straining healthcare, pension, and social protection systems. Many older people lack social poverty or income limitation, chronic health problems, and social isolation.

Against this backdrop, HelpAge International and its local partners piloted the Intergenerational Self-Help Club (ISHC) model in 2006. Rooted in community participation and empathy, the ISHCs have since scaled economy-wide and become part of Viet Nam's strategy for healthy ageing.

Solution

ISHCs are voluntary, community-based organizations designed to meet the multi-dimensional needs of older adults while engaging younger generations. Each club typically includes 50–70 members and follows a structure with an elected board renewed every two years. Membership is intergenerational, with roughly two-third older people (60+), two-third women across age groups, and two-third socially and/or economically disadvantaged.

They operate around eight core activity areas, making them comprehensive platforms for resilience and inclusion:

- **Social and cultural activities:** Games, performances, exchange and home visits to reduce isolation.
- **Health care:** Regular health monitoring, periodical health checks up, physical exercise & sports groups, wellness education, access to health insurance and referral.
- **Home care services:** Volunteer-led home care services covering social, personal, medical and daily support.
- **Life-long learning:** Talks, study visits, and intergenerational exchanges, particularly on digital knowledge sharing in pilot ISHCs.
- **Food and income security:** Revolving fund schemes, training on age friendly income generating activities and techniques, and micro-enterprises such as poultry farming and vegetable growing. Economic development volunteers are promoted to provide peer support to those in need.
- **Emergency support & community development:** Monthly self-help sessions, in-kind aid such as rice and assistive devices and participate in the community's activities such as village road cleaning, flowers and tree planting, raising matters of concern, etc.

- **Rights and entitlements:** Legal awareness, policy dialogue, policy implementation monitoring, and advocacy with local authorities.
- **Resource mobilization:** Income from self managed revolving fund, membership fees, local donations, and income-generating activities to ensure financial sustainability.

This flexible, locally owned model adapts to community needs while aligning with government priorities for social protection and healthy ageing.

Outcomes

The ISHCs have demonstrated significant and wide-ranging impact. By 2025, the model had expanded to 9,000 clubs across all 63 provinces, driven by the government's ISHC Replication Project. The ISHCs help increase income and health status of the members, improve the community solidarity and much more than that. A survey data of 10,405 members of 186 clubs in 6 provinces/cities from 2021-2024 show that: nearly 100% of the club members reported that they feel happier and healthier since joining the clubs, their community solidarity is better, their feel more confident, with improved knowledge and 82% of the members report increased income.

Key Takeaways

The experience of ISHCs underscores the potential of community-driven, intergenerational solutions in addressing the challenges of ageing in low- and middle-income contexts.

Equally important is the recognition and support from government, which has enabled the ISHC model to move from small pilot projects to an economy-wide system embedded in policy. This partnership has been critical for sustainability and scale. The success of the ISHCs has also inspired replication in other economies such as Cambodia; Indonesia; and Myanmar.

5.2.4 GetSetUp (United States)

Background

As societies age, older adults face growing challenges in staying socially connected, learning new skills, and adapting to rapid digitalization. Traditional education formats often create barriers, as older adults may feel intimidated by fast-paced instruction or by trainers from much younger generations. This can result in lower confidence, digital exclusion, and social isolation.

Founded in 2019, GetSetUp set out to address this gap. The company provides an innovative digital platform tailored to older adults' learning needs, with a clear mission: to empower older adults through accessible education, social engagement, and purposeful community participation.

Solution

At the heart of GetSetUp's model is peer-to-peer teaching, where older adults not only learn but also serve as instructors for their peers. This approach has proven to be especially powerful for older people, who often learn more effectively when guided by someone who shares their life stage, pace, and perspective. Peer instructors can anticipate common challenges, explain concepts in plain language, and build trust by showing that "if they can do it, so can I."

Through this model, GetSetUp offers thousands of live and recorded classes across technology, health and wellness, entrepreneurship, and hobbies. Classes range from learning how to use Zoom or WhatsApp, to managing online banking securely, to staying active with virtual fitness. The learning environment is conversational, supportive, and confidence-building, making digital inclusion far more accessible.

Outcomes

GetSetUp now serves millions of older people in more than 160 economies, with participants reporting increased digital literacy, social connection, and personal empowerment. Crucially, the peer-to-peer model has broken down barriers of fear and intimidation. Many learners who once hesitated to touch a smartphone or join an online meeting now confidently use digital tools in daily life.

The platform has also transformed learners into leaders. Older people who mastered certain skills, such as video conferencing, online selling, or digital art, have stepped up as peer trainers, creating a cycle of empowerment. This not only spreads knowledge but also fosters purpose, as older adults see themselves valued not just as recipients of care but as active contributors to society. During the COVID-19 pandemic, this model proved vital: older people taught one another how to access telemedicine, connect with families online, and join virtual communities, reducing isolation at a critical time.

Key Takeaways

The GetSetUp experience highlights that peer-to-peer teaching is not just a method, it is the key to effective learning for them. Older people are more willing to engage, ask questions, and persist when they are taught by peers who understand their challenges and can share relatable solutions. This builds trust, accelerates learning, and reinforces confidence.

5.3 Digital Health Solutions

5.3.1 Nirun Smart Health Management System for Older People Nursing Homes (Thailand)

Background

Thailand is among the fastest ageing societies in Southeast Asia. In 2024, approximately 15 percent of its population was over 65, and this share is projected to rise to 26 percent by 2040. With growing demand for institutional care, public nursing homes face chronic caregiver shortages. On average, a single caregiver in Thailand public facilities supports at least eight older residents, well above international standards. It makes difficult to deliver consistent, high-quality care.

While numerous technologies for elderly health monitoring exist, many remain at prototype stage and are not integrated into daily operations. This gap underscored the need for a scalable, practical solution tailored to the needs of caregivers and residents in Thailand's public elderly care centers.

Solution

In 2021, the National Science and Technology Development Agency (NSTDA) in Thailand introduced Nirun, a smart health management system specifically designed for older people nursing homes. The platform integrates multiple modules to streamline health monitoring, care planning, and caregiver task management. Built on a modular programming architecture, Nirun supports five layers of operation:

- **Caregiver Management System:** Track staff assignments and workload distribution.
- **Care Plan Management System:** Generate individualized care plans based on health assessments and activities of daily living indices.
- **Electronic Health Records (EHRs):** Centralize medical history, allergies, daily vitals, and assessments for each resident.
- **Nutrition Recommendation System:** Plan menus that meet older adults' health and dietary needs within budget constraints.
- **Preventative Monitoring System:** Link to IoT devices such as wearable sensors, smart alarms, and GPS trackers to alert caregivers of risks (e.g., falls, dementia wandering).
- **Health Checkup Kiosk and Portable Health Kits:** Allow regular monitoring of vital signs, with data fed into the EHR.
- **Telemedicine and Emergency System:** Enable remote consultations and rapid access to records in critical situations.

Outcomes

Nirun has transformed health and care management in Thailand's nursing homes. The system was first piloted at Ban Bang Khae Social Welfare Development Center in Bangkok and has since been deployed in 12 elderly welfare centers across Thailand, with training provided for staff at each site.

By April 2023, over 1,400 older adults were registered across 12 centers, with health data continuously updated and linked across systems. Caregivers reported reduced workloads thanks to automated record-keeping, integrated monitoring, and real-time alerts, enabling them to focus more on personalized care. For administrators, dashboards and reporting tools provided transparency in staffing, budgeting, and health outcomes.

The system has also supported better health outcomes by ensuring timely detection of risks such as falls, infections, or sudden changes in vital signs. Nutrition modules improved dietary planning, while caregiver training sessions enhanced familiarity with digital tools. Importantly, Nirun has created a platform flexible enough to integrate with new devices and expand into additional local administrative organizations across Thailand.

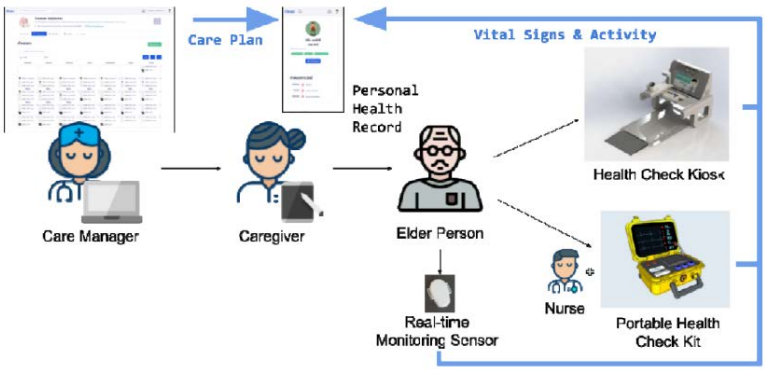
Expansion to Community-Based Care

Recognizing that most elderly Thais prefer to age in place and that residential care requires substantial resources, NSTDA has also adapted the Nirun platform for use in community settings. This extension supports the growing network of trained local caregivers deployed across provinces to provide at-home care.

The system now serves as the primary tool for caregivers working in local communities, enabling remote monitoring, task coordination, and data reporting—even outside institutional settings. This scalability ensures continuity of care while reducing the need for costly infrastructure.

Key Takeaways

Nirun demonstrates how locally developed, modular digital platforms can address systemic challenges in elderly care. By integrating caregiver management, health monitoring, and telemedicine within one platform, the system reduces fragmentation and improves both efficiency and quality of care. Its deployment across 12 centers highlights the importance of scalable design, government support, and caregiver training in ensuring adoption.



5.3.2 China Unicom's Smart Elderly Care Ecosystem (China)

Background

China is entering a super-aged society, with a growing share of older adults who require not only healthcare and caregiving support but also safe and reliable digital access. For many older people, barriers such as unfamiliar technology, digital fraud, and fragmented care systems create risks of exclusion. As one of the world's leading telecommunications and information service providers, China United Network Communications Group Co., Ltd. ("China Unicom") has leveraged its comprehensive infrastructure and digital capabilities to design integrated solutions for ageing populations. Its initiatives align with China's strategies of “Digital China” and “Healthy Ageing,” demonstrating how large-scale telecom operators can play a foundational role in bridging the digital divide for older people.

Solution

China Unicom Beijing Branch has built a “2H (Home) + 2C (Consumer) + 2B (Business)” Smart Elderly Care Ecosystem, designed to meet the needs of families, individuals, and institutions through digital infrastructure and service innovations.

- **For Homes:** The company provides safety and health monitoring through intelligent devices such as smart cameras, smoke detectors, and fall-detection radars. Its “Beijing Home Care Trio”—smart mattress, fall radar, and one-touch alarm—enables real-time monitoring of heart rate, respiration, and fall risk, with emergency alerts linked to families and community service centers. In addition, China Unicom's elder-friendly “Older User Mode” function has been embedded, with larger fonts, voice support, and simplified navigation.
- **For Consumers:** The China Unicom Health app integrates health records, personalized knowledge, online consultations, and health reports, linking seamlessly with smart devices. To protect digital safety, China Unicom Beijing Branch has applied big data analytics to detect and block fraud-related calls and messages, while running awareness campaigns to enhance older adults’ resilience to scams. Customized mobile data packages such as the “Silver Age Card” offer affordable and age-friendly communication services.
- **For Businesses:** China Unicom Beijing Branch provides digital management platforms for elderly care institutions and communities. These platforms integrate staff scheduling, service workflows, and government oversight, enabling data sharing across families, institutions, and healthcare providers. The “Digital Community Doctor” system in Beijing's one district combines 5G and AIoT technologies to create full-lifecycle health profiles for residents, addressing problems of fragmented data and uneven resources.

Outcomes

Several flagship projects highlight the tangible impact of this ecosystem. In Beijing's one district, China Unicom Beijing Branch has built and supervised nearly 7,000 smart home care beds by June 2025 since 2022, using smart mattresses and the “JingXin Care” platform to deliver standardized, transparent, and high-quality home care services. In partnership with health care institutions, the company has developed a cloud-based digital management platform that supports managers, staff, older adults, families, and regulators through shared data and interconnectivity, significantly enhancing efficiency and service quality. Meanwhile, the “Digital Community Doctor” system has transformed community health management by integrating family doctor contracts, health monitoring, referrals, and follow-up services into a unified system, improving continuity and proactive care.

Key Takeaways

China Unicom's approach demonstrates how telecom infrastructure providers can become enablers of inclusive ageing solutions. By combining network infrastructure, smart devices, digital health platforms, and anti-fraud protection, the company has created a comprehensive model that addresses the multi-layered needs of older adults and caregivers. Its projects show the value of:

- Leveraging digital infrastructure as a backbone for age-friendly services.
- Customizing solutions for different users (families, individuals, institutions).
- Integrating data and services across health, safety, and caregiving ecosystems.

5.3.3 iAgeHealth – Multidisciplinary Digital Health Platform for Aged Care (Australia)

Outcomes

Australia's aged care sector faces significant challenges, including healthcare disparities, workforce shortages, and difficulties ensuring continuity of care for older adults, particularly in regional and rural settings. These issues have created uneven health outcomes, delayed interventions, and stress for both families and care providers.

Recognizing the urgent need for scalable solutions, McLean Care, an award-winning aged care provider, partnered with Deakin University and a specialist Australian software developer to create iAgeHealth—a digital health management platform designed to bring equality, efficiency, and multidisciplinary collaboration into aged care services.

Solution

iAgeHealth is a multidisciplinary digital health platform that integrates seamlessly with existing aged care systems and teams. It leverages government-approved IoT devices and plugins to deliver accurate, real-time health data into care workflows. Key features include:

- **Integration with existing hardware:** Minimize costs by working with equipment already in use.
- **IoT-enabled monitoring:** Connect devices such as wearable health sensors, vitals monitors, and other digital tools to patient records.
- **Continuity of care:** Ensure that information flows across doctors, nurses, caregivers, and families, avoiding duplication and gaps.
- **Clinical-grade design:** Develop with direct involvement from aged care clinicians, ensuring practicality and safety.
- **Collaborative ecosystem:** Enable multidisciplinary teams to work together, supported by real-time data and alerts.

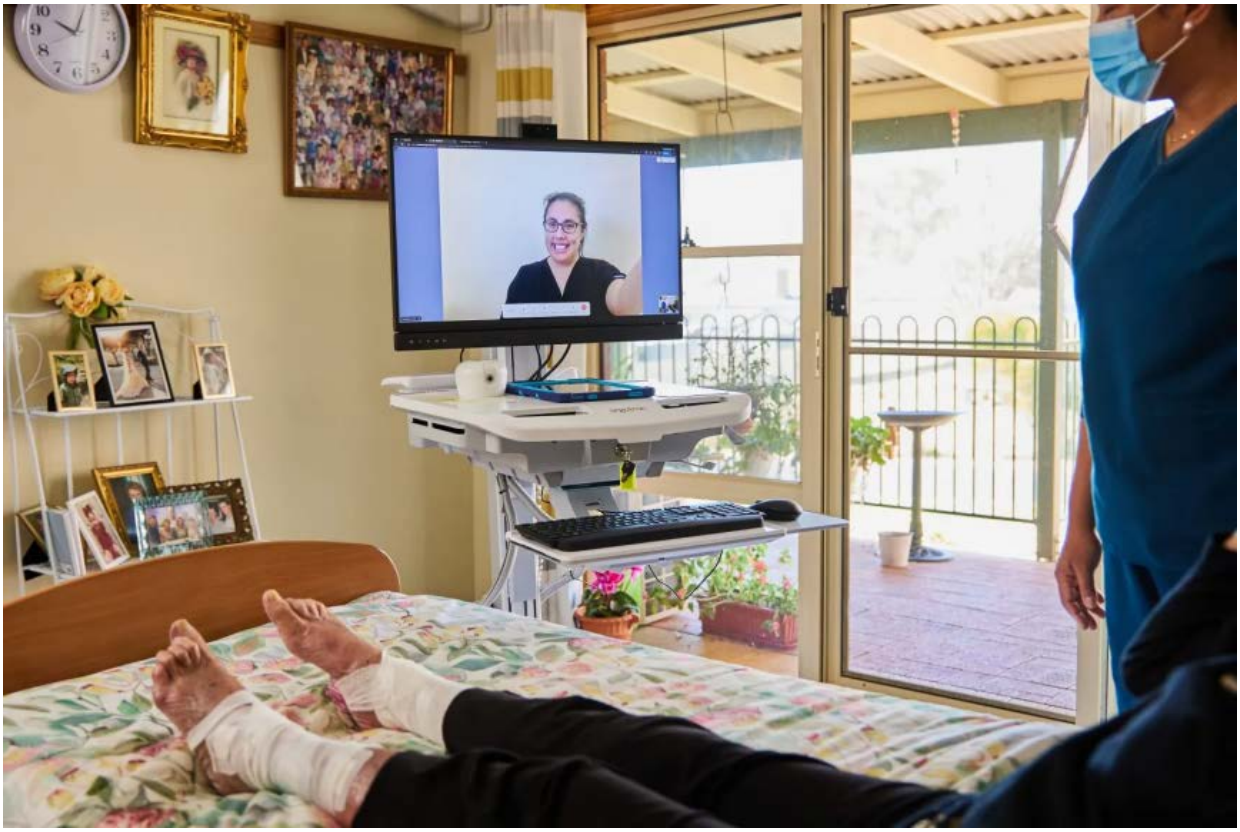
Outcomes

Since deployment, iAgeHealth has delivered clear improvements in aged care delivery:

- **Better health outcomes:** Timely data-driven interventions have reduced avoidable hospitalizations and improved chronic disease management.
- **Increased efficiency:** Streamline workflows reduced the administrative burden on staff, allowing more time for direct resident care.
- **Enhanced equality:** By making specialist input more accessible across facilities, iAgeHealth addressed disparities between urban and rural aged care providers.
- **Trust and peace of mind:** Families and residents reported higher confidence knowing that monitoring and communication systems were integrated and reliable.

Key Takeaways

iAgeHealth shows how locally developed digital health platforms can empower the aged care sector to overcome disparities in access, continuity, and quality of care. By leveraging IoT connectivity and multidisciplinary collaboration, it sets a benchmark for how digital tools can support healthier ageing while easing pressure on overstretched care staff. For APEC economies, the case illustrates how co-designed, clinically tested platforms can build trust and improve equality in aged care systems.



5.3.4 WiseDiag Technology's Haoban AI – An AI-powered Personal Health Management App (China)

Background

China's ageing population and rising burden of chronic diseases are accelerating the need for scalable, affordable, and high-quality health management services. Traditional healthcare systems face challenges in providing timely consultations, chronic disease management, and personalized care at scale. At the same time, older adults often encounter barriers to accessing expert medical resources due to geographic, economic, and workforce constraints.

To address these challenges, WiseDiag Technology, a global pioneer in AI large model innovation for medical and health applications, developed Haoban AI. It is an intelligent health management application powered by its proprietary WiseDiag cross-modal medical large language model.

Solution

WiseDiag model integrates reinforcement learning, retrieval-augmented generation (RAG), intent recognition, and lifelong memory capabilities. It is also unique in combining Western and Traditional Chinese Medicine knowledge. Building on this foundation, Haoban AI provides expert-level personal health management services across multiple scenarios:

- **Health consultation and knowledge:** Real-time, AI-driven medical Q&A based on evidence-based medicine and expert clinical experience.
- **Disease screening and risk prediction:** Early identification of chronic disease risks, with predictive accuracy exceeding 90% in pilot projects.
- **Chronic disease monitoring:** Continuous tracking of conditions such as hypertension and diabetes, with alerts for abnormal changes.
- **Personalized health management:** Integration with smart devices to generate health analysis reports and tailored lifestyle or treatment recommendations.
- **Medical record management:** Intelligent interpretation of physical examination reports and creation of longitudinal health files.

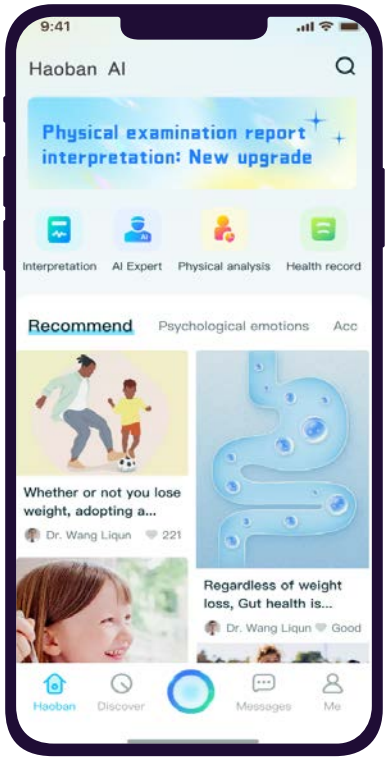
By September 2025, Haoban AI had been adopted by more than 300 leading hospitals in China, creating over 2,000 “digital doctor twins”. The app had served nearly 1 million users and facilitated over 10 million medical consultations, making expert-level health advice available to residents at low cost and high accessibility.

Outcomes

The deployment of Haoban AI has delivered system-level benefits:

- At the grassroots level, the app empowered 191 family doctor teams in Hangzhou's Linping District, covering over 300,000 residents, enabling tiered AI–primary care–specialist collaboration.
- It improved disease prevention through accurate chronic disease risk prediction and multi-condition management.
- It increased healthcare accessibility, enabling older people to receive expert-level consultations via official hospital WeChat accounts or directly through the app, without the need to travel to tertiary hospitals.
- It lowered costs by reducing unnecessary hospital visits and optimizing care coordination, benefiting both patients and health systems.

These outcomes were recognized, with Haoban AI included in China's 2025 Key R&D Program, signaling its role as a benchmark innovation in intelligent health management.



Key Takeaways

WiseDiag Technology's Haoban AI demonstrates how AI-powered digital health solutions can extend high-quality medical services to older adults at scale. By integrating advanced medical AI models with grassroots healthcare teams, the app bridges gaps in chronic disease management, empowers primary care, and lowers barriers to expert consultation. Its multilingual versions including English, Chinese, Indonesian, and Arabic, enable rapid deployment and localization across APEC economies, supporting inclusive access for diverse ageing populations.

5.3.5 Nurotron – Neuro-electronic Prosthetics for Hearing and Beyond (China)

Background

Hearing impairment is one of the most prevalent chronic conditions among older adults. In China, over 120 million older adults suffer from hearing loss, according to the 7th National Population Census and China's Hearing Health Condition and Trend Report. Yet for years, access to cochlear implants was limited due to technology barriers and prohibitively high prices. Only a fraction of eligible patients received implants, leaving most unable to access solutions that restore their ability to communicate and live independently.

In 2006, entrepreneur Fangping Li founded Nurotron in Hangzhou to break this dependency. Driven by personal commitment and a sense of social responsibility, the company aimed to develop indigenously innovated neuro-electronic medical devices, beginning with cochlear implants.

Solution

Nurotron specializes in neuro-prosthetics and neuromodulation, producing devices that replace or enhance lost functions in hearing, vision, and motor systems. The launch of its cochlear implant system marks a milestone marking China's "from zero to one" breakthrough in domestic cochlear implant R&D.

Key features and innovations include:

- **Featuring thinner, high-precision implants** with the industry's largest number of 24 intracochlear channels and finely tuned frequency distribution, the system effectively enhances hearing resolution, facilitates clearer identification of sound details, and improves speech recognition in noisy environments.
- **Continuous iteration** – five product generations developed, incorporating advanced digital signal processing to enhance sound quality.
- **Affordability** – devices priced at around one-third of foreign imports, significantly lowering the cost barrier for Chinese families.
- **Expanding pipeline** – R&D into artificial retinas, brainstem implants, and neuromodulation devices to restore vision and mobility functions.
- **Collaborative model** – partnerships with leading overseas scientists and institutions, combined with a growing domestic innovation team.

Outcomes

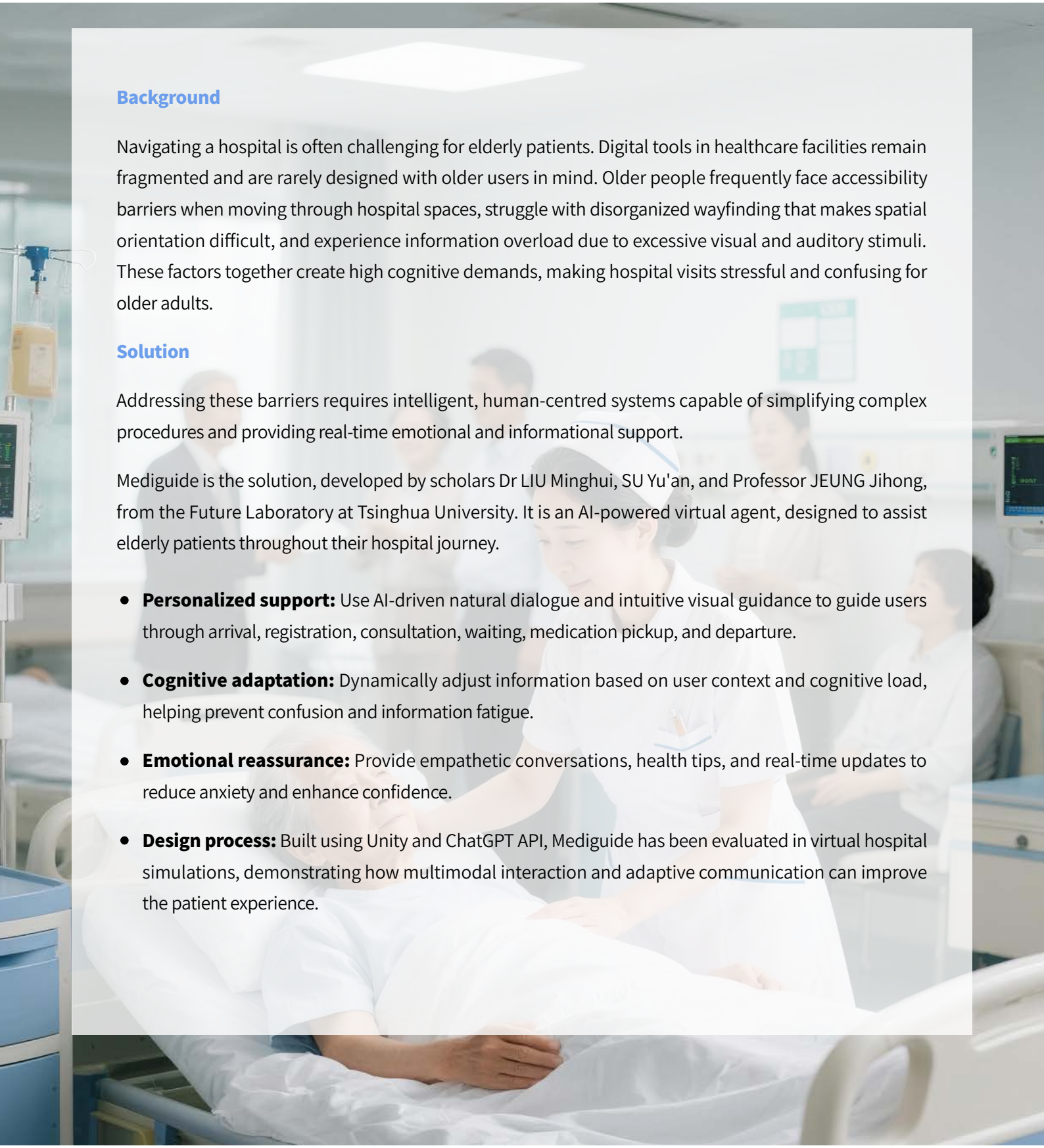
Nurotron's innovations have created affordable access to advanced auditory rehabilitation:

- Its cochlear implants covered 20% of the domestic Chinese market, with annual sales of about 3,000 units in 2024.
- Quality assurance – despite lower costs, devices meet international safety and performance standards, gaining the trust of hospitals and patients.
- Social transformation – older adults who previously "could not afford to hear" now have affordable options, supporting better communication, greater independence, and an improved quality of life.

Key Takeaways

Nurotron exemplifies how indigenous medical innovation can transform access to critical health technologies for older people. By lowering costs and continuously innovating, it has empowered thousands of older adults to regain hearing while laying the foundation for breakthroughs in vision and motor rehabilitation.

5.3.6 Mediguide – Virtual Smart Assistant for Elderly Patients (China)



Background

Navigating a hospital is often challenging for elderly patients. Digital tools in healthcare facilities remain fragmented and are rarely designed with older users in mind. Older people frequently face accessibility barriers when moving through hospital spaces, struggle with disorganized wayfinding that makes spatial orientation difficult, and experience information overload due to excessive visual and auditory stimuli. These factors together create high cognitive demands, making hospital visits stressful and confusing for older adults.

Solution

Addressing these barriers requires intelligent, human-centred systems capable of simplifying complex procedures and providing real-time emotional and informational support.

Mediguide is the solution, developed by scholars Dr LIU Minghui, SU Yu'an, and Professor JEUNG Jihong, from the Future Laboratory at Tsinghua University. It is an AI-powered virtual agent, designed to assist elderly patients throughout their hospital journey.

- **Personalized support:** Use AI-driven natural dialogue and intuitive visual guidance to guide users through arrival, registration, consultation, waiting, medication pickup, and departure.
- **Cognitive adaptation:** Dynamically adjust information based on user context and cognitive load, helping prevent confusion and information fatigue.
- **Emotional reassurance:** Provide empathetic conversations, health tips, and real-time updates to reduce anxiety and enhance confidence.
- **Design process:** Built using Unity and ChatGPT API, Mediguide has been evaluated in virtual hospital simulations, demonstrating how multimodal interaction and adaptive communication can improve the patient experience.

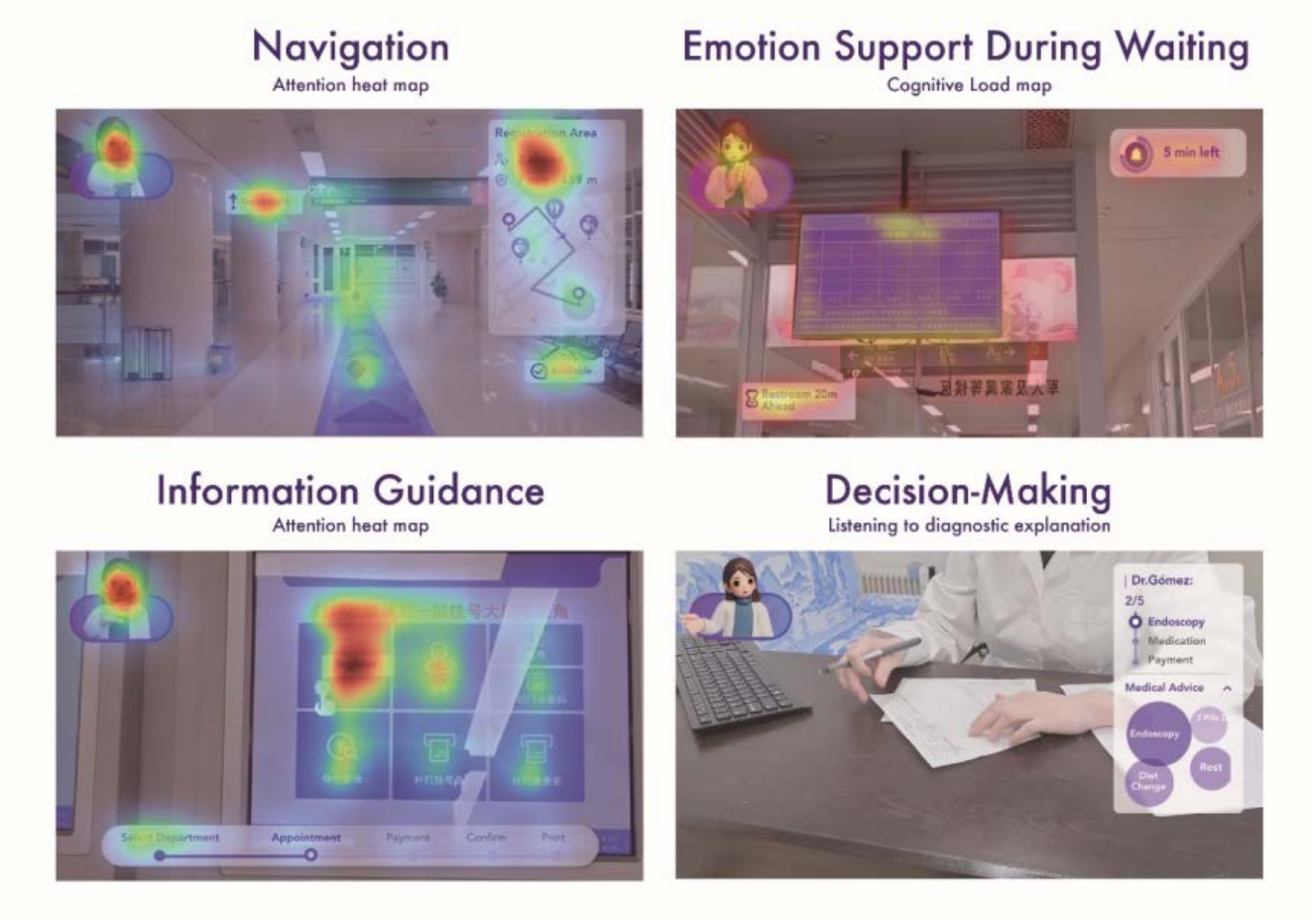
Outcomes

Simulation-based evaluations found that Mediguide reduced task errors, improved comprehension of medical procedures, and enhanced overall satisfaction among older adults. Participants reported feeling calmer, more autonomous, and better supported when using the app.

Key Takeaways

Mediguide exemplifies how AI based virtual agent can transform healthcare into an empathetic, cognitively accessible experience for older adults. It shows that when hospitals integrate intelligent systems designed for cognitive and emotional diversity, they not only improve patient autonomy but also enhance the inclusiveness of care environments.

For APEC economies, the case highlights the importance of embedding human-centred design into digital health strategies, ensuring that technological innovation goes hand in hand with emotional reassurance, accessibility, and user trust. Prototype-led innovations such as Mediguide have demonstrated a practical pathway toward more inclusive and responsive digital healthcare systems across the region.



5.4 LTC and Caregiver Support

5.4.1 Kami Vision – AI-Powered Fall Detection Camera (United States)

Background

Falls are one of the leading causes of emergency incidents among older people, with one in four older Americans experiencing a fall reported in 2020. These events often result in injury, hospitalization, or loss of independence, creating stress for families and caregivers. While wearable medical alert systems have long been the standard, many older people forget or resist wearing them, leaving gaps in safety.

To address this issue, Kami Vision Inc., a U.S.-based AI company, introduced the Kami Fall Detect Camera. This AI-powered home safety solution is designed to deliver non-intrusive, always-on fall detection, backed by 24/7 monitoring and direct emergency response.

Solution

The Kami Fall Detect Camera combines computer vision AI, smart home security, and professional monitoring in a single device. Key features include:

- AI-powered fall detection with 99.5% accuracy, validated against more than 3,700 fall incidents recorded in 2023.
- Non-wearable monitoring, making it suitable for older adults who may forget or decline to use pendants or watches.
- 24/7 professional monitoring with the option to escalate to emergency services via RapidSOS integration if caregivers do not respond to an alert.
- Real-time alerts and two-way communication, enabling family members or caregivers to receive video clips and talk to older adults through the Kami Home app.
- Night vision and motion tracking to ensure reliable monitoring in low-light conditions.
- Unlimited user sharing, allowing multiple caregivers, family members, or neighbors to stay connected.
- Privacy-first design, with blurred footage reviewed by monitoring staff and bank-level encryption to protect personal data.

Outcomes

Early pilots of the Kami Fall Detect Camera in independent living homes and older people care communities have demonstrated clear benefits:

- **Improved safety:** Falls are detected instantly, with faster emergency responses that reduce the severity of outcomes.
- **Greater independence:** Older adults gain confidence moving around at home without needing to wear or activate devices.
- **Reduced caregiver stress:** Real-time alerts and professional monitoring ensure that families are informed even when they are unavailable.
- **Affordable access:** With an introductory price of USD 99.99 and subscription options starting at USD 45 per month, Kami provides a DIY, cost-effective alternative to traditional medical alert systems.

Key Takeaways

Kami Vision's Fall Detect Camera illustrates how vision AI and ambient monitoring technologies can overcome the limitations of traditional wearables. Its emphasis on non-intrusive design, affordability, and integration with emergency services provides a replicable model for other APEC economies seeking to reduce fall-related risks among ageing populations.

5.4.2 Intelligent Rehabilitation Exoskeleton Robot, by Hangzhou RoboCT Technology (China)

Background

Stroke, spinal cord injuries, and neurodegenerative conditions are major causes of lower-limb mobility impairment among older adults and patients in LTC. These conditions often result in loss of independence, increased caregiver burden, and high healthcare costs. Traditional rehabilitation therapies, while beneficial, are labor-intensive and limited in scalability.

To address these challenges, Hangzhou RoboCT Technology Development Co., Ltd. has developed a new generation of intelligent rehabilitation exoskeleton robots. Combining principles of neuroplasticity, robotics, and AI, the system delivers personalized, data-driven rehabilitation training tailored for older adults and patients with mobility impairments.

Solution

The rehabilitation exoskeleton robot applies the principle of "motor relearning" supported by AI and ecological modeling. It provides standardized gait input and allows training that progresses from passive to assisted to active walking, thereby stimulating motor potential and enhancing recovery.

Key features include:

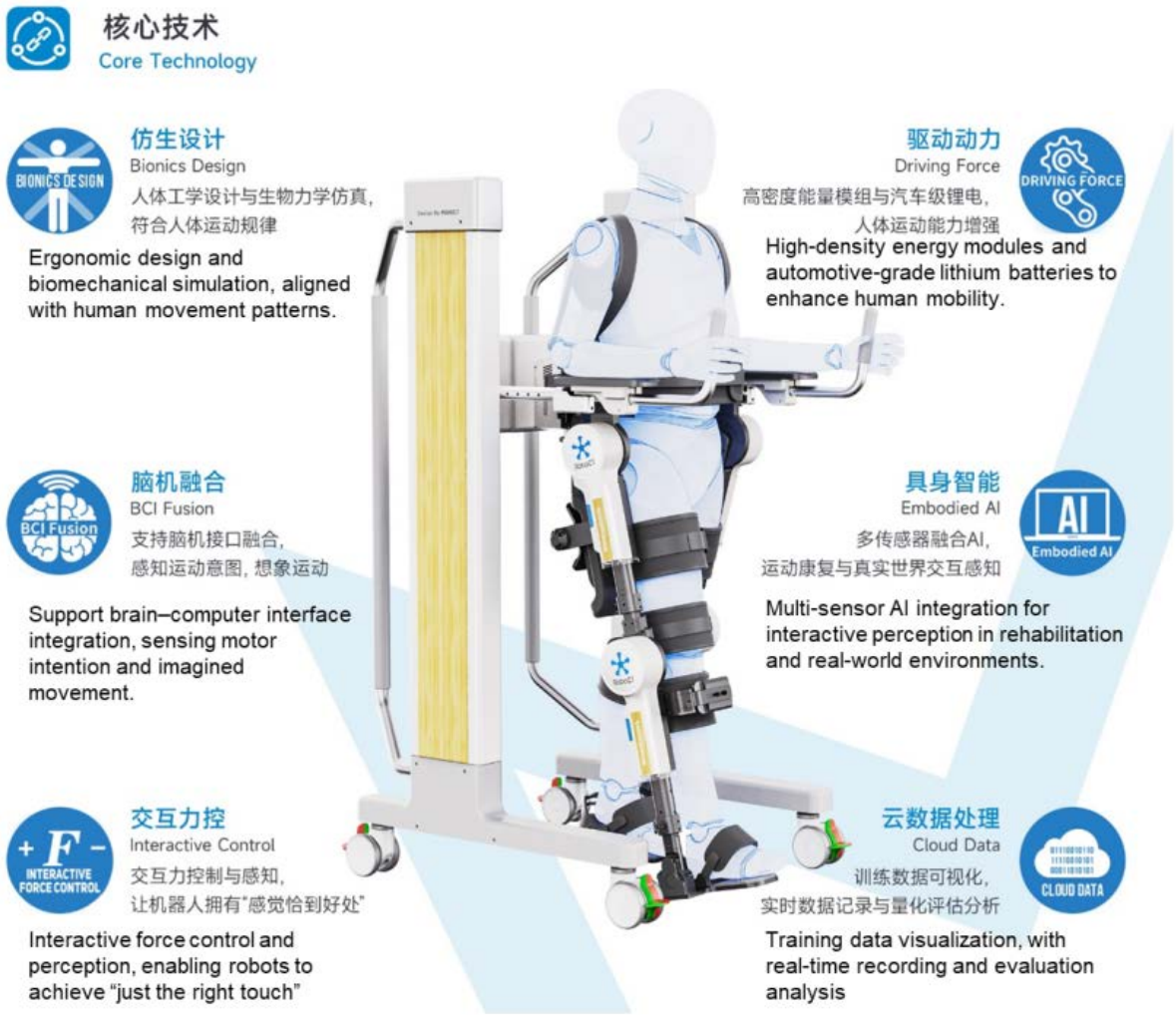
- **Core technologies:** Advanced bionic design enables natural, human-like movement, while brain–computer interface (BCI) integration supports intention-driven training. Interactive force control adapts resistance in real time to ensure safety. Embodied AI processes multi-sensor data to deliver continuous feedback, and cloud-based data systems store, visualize, and analyze rehabilitation progress.
- **Product advantages:** The system offers multiple training modes (passive, assisted, active, imitation) with adjustable parameters such as step length and power. Built-in evaluation tools assess gait and muscle performance, complemented by extensions for walking aids and functional exercise.
- **Applicable scenarios:** The robot can be deployed in rehabilitation hospitals, eldercare institutions, and outpatient clinics with trained staff. It is suitable for patients recovering from stroke, brain trauma, spinal cord injuries, or age-related muscle weakness.
- **Management system:** A smart rehabilitation platform digitizes training sessions and supports clinicians and caregivers. Interactive dashboards allow staff to monitor patient progress, adjust treatment plans, and ensure continuity of care across facilities.

Outcomes

The RoboCT exoskeleton has shown strong potential to improve both patient outcomes and care efficiency. It enables individuals with mobility impairments to regain walking ability or enhance independence, while easing caregiver workload by automating parts of the rehabilitation process. Hospitals and rehabilitation centers benefit from real-time data collection and treatment optimization, allowing staff to supervise more patients simultaneously. For older adults experiencing degenerative mobility loss, the system offers a means of preserving functional ability and delaying dependency.

Key Takeaways

This case illustrates how robotics and AI-driven rehabilitation technologies can transform LTC and mobility support for older adults and patients with neurological conditions. By combining intelligent exoskeletons with cloud-based management and clinical integration, the system not only supports physical recovery but also improves efficiency and data transparency in rehabilitation institutions.



5.4.3 AIREC – AI-Powered Humanoid Care Robot (Japan)

Background

Japan is at the forefront of demographic change, with one of the world's fastest ageing populations. The imbalance between demand for elder care and the supply of workers has become acute: by late 2024, there was only one candidate for every 4.25 open care positions. This labor shortage has intensified the search for technological innovations that can supplement caregiving staff and ensure that older adults continue to receive dignified, safe, and consistent care.

Solution

To respond to this challenge, researchers at Waseda University, led by Professor Shigeki Sugano, developed AIREC, a general-purpose humanoid robot designed to handle a broad range of activities — from everyday tasks to caregiving. Unlike industrial robots, AIREC is built to safely interact with vulnerable individuals in unpredictable real-world conditions.

- **Core functions:** Reposition patients to prevent bedsores, assisting with dressing even with socks, supporting transfers from bed to wheelchair, and helping prepare simple meals.
- **Technology base:** Powered by a deep neural network (DNN) that predicts joint movements and adjusts grip strength and force in real time, ensuring both safety and adaptability.
- **Integration:** Pilot projects are underway in care facilities like those of Sijinkai, where AIREC is being tested alongside other smart-care tools such as sleep sensors and interactive exercise robots.

This combination of AI precision and humanoid form factor makes AIREC one of the most advanced attempts globally to embed robotics directly into hands-on caregiving.

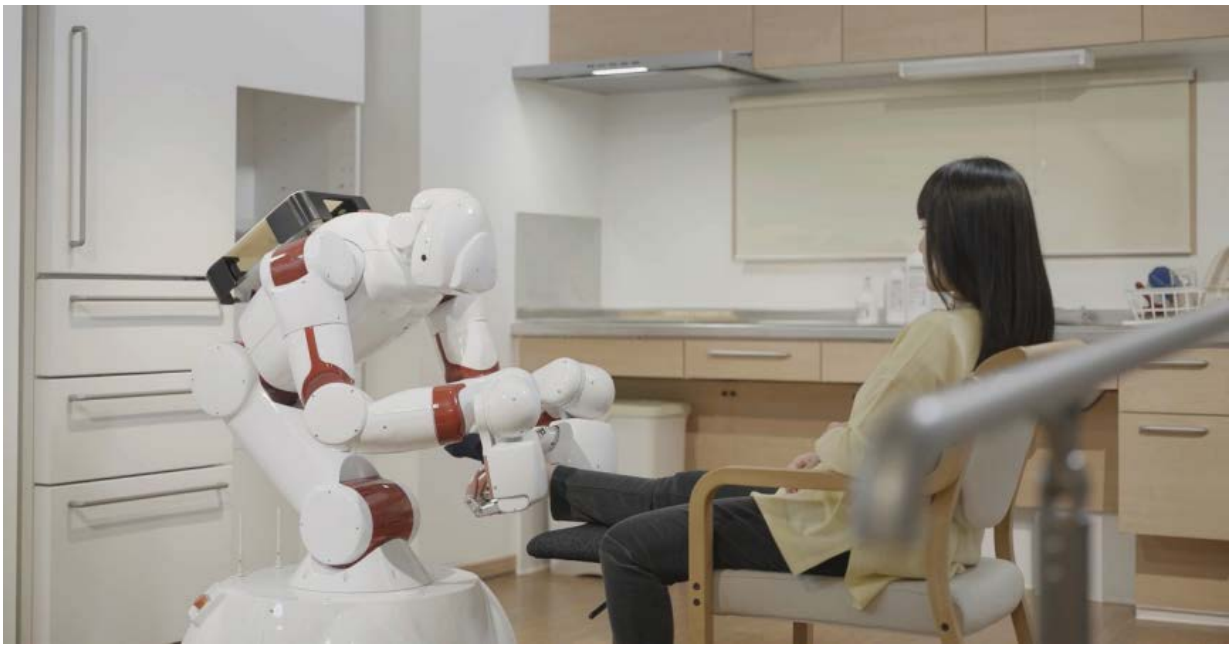
Outcomes

While still in the trial stage, AIREC has shown that robots can perform physical care tasks with a level of consistency and safety that eases pressure on human staff. Key outcomes include:

- **Relief of workload:** Reduce repetitive and physically demanding tasks for caregivers, such as repositioning patients or lifting.
- **Quality of care:** Ensure timely interventions (e.g., reducing risks of pressure ulcers).
- **Staff wellbeing:** Lower the risk of musculoskeletal injuries among care workers.

Key Takeaways

AIREC exemplifies how AI-powered robotics can directly address labour shortages in long-term care, a challenge increasingly shared across APEC economies. Japan's experience shows that humanoid care robots, when integrated into real-world service settings, can supplement human caregivers, reduce physical strain, and improve consistency in daily care. For APEC members, the case highlights the potential of AI-enabled assistive technologies to strengthen long-term care systems, enhance workforce sustainability, and ensure dignity and quality in eldercare.



5.4.4 E-BAR – Elderly Bodily Assistance Robot (United States)

Background

The United States faces a growing gap between the needs of its ageing population and the availability of caregiving support. Rising healthcare costs and shrinking family-based care networks have increased demand for assistive technologies that help older people maintain independence at home. Traditional aids such as walkers and transfer devices provide limited physical support and often carry a sense of stigma, discouraging regular use. This context has accelerated the search for intelligent, user-friendly robotic systems that can offer both physical assistance and emotional reassurance for older adults ageing in place.

Solution

In response, engineers at the Massachusetts Institute of Technology (MIT) designed the Elderly Bodily Assistance Robot (E-BAR), a mobile robotic system that provides active physical support, fall prevention, and independence for older adults ageing in place.

- **Physical support:** E-BAR's articulated robotic arms act as handlebars that older adults can lean on, or use to transition smoothly from sitting to standing and vice versa.
- **Mobility assistance:** With an omnidirectional wheeled base and reconfigurable 18-bar linkage system, the 220-pound robot can follow older adults around the home, support balance while bending or reaching, and even help navigate obstacles such as bathtubs.
- **Fall prevention:** The arms are embedded with rapid-inflating airbags that deploy instantly to catch a person if they fall, the first robot of its kind to do so without requiring wearable devices or harnesses.
- **User-centered design:** Based on interviews with older adults and caregivers, the robot is designed to fit through standard doorways, allow natural stride length, and provide unobstructed freedom of movement.

Outcomes

Laboratory trials demonstrated E-BAR's capacity to support safe, independent movement in daily activities such as reaching, stretching, and transitioning between postures. Participants reported greater confidence, reduced reliance on human assistance, and improved sense of control in their living environments.

Key Takeaways

E-BAR illustrates how assistive robotics can bridge the gap between independence and safety, enabling older people to remain active and self-reliant within their homes. For APEC economies, the case shows that human-centred assistive robots can extend the reach of long-term care beyond institutions, complementing caregivers through consistent, on-demand physical support and helping ageing societies sustain independence with dignity.

5.5 Lessons for APEC

The review of best practices from APEC economies demonstrates that digital solutions and technologies are not peripheral tools, but core enablers for strengthening the connectivity and healthiness of older adults.

They directly respond to the structural gaps identified in previous chapters, including access, affordability, limited digital literacy, fragmented health integration, and caregiver strain, by showing how innovation can translate inclusion into practice.

Grouped under the four analytical dimensions, four actionable insights emerge that can inform regional cooperation and policy design.

5.5.1 Digital Connectivity

The experiences of Japan's Raku-Raku smartphone and China's mobile app retrofits highlight the importance of embedding accessibility features into the very design of digital infrastructure. Connectivity for older people is not simply about providing network access, but ensuring that devices and platforms are usable, secure, and tailored to their needs.

Economy-wide standards and regulatory frameworks can set the baseline for age-friendly design, while community-based programmes complement these measures by offering practical training and support.

Together, these examples suggest that APEC economies should view connectivity not only as a technical infrastructure challenge but also as a social inclusion agenda that empowers older people to participate meaningfully in the digital economy and society.

5.5.2 Digital Literacy and Capacity Building

Initiatives such as Singapore's Seniors Go Digital programme; Hong Kong, China's Smart Silver inclusion programme; Viet Nam's ISHC; and the global reach of GetSetUp illustrate that digital literacy is most effective when it is rooted in community, trust, and empathy.

Peer-to-peer learning and intergenerational exchange are especially valuable, as they reduce intimidation, encourage persistence, and build confidence among older learners. Meanwhile, targeted outreach to vulnerable groups, small class sizes, and one-on-one mentorship have proven to be practical ways of addressing disparities.

The lesson for APEC is that digital capacity building should go beyond technical instruction. It can expand to cultivate long-term confidence and social engagement, positioning older adults both as learners and as contributors and leaders in the digital space.

5.5.3 Digital Health Solutions

Cases from Australia; China; Thailand; and the United States demonstrate that digital health tools can ease the burden on health systems while improving accessibility for older adults.

From AI-powered personal health management apps to modular nursing home systems and companion robots, technology can bridge workforce shortages, extend medical expertise to underserved areas, and enhance chronic disease management. The success of these models rests on integration, linking data, caregivers, and institutions to create continuity of care.

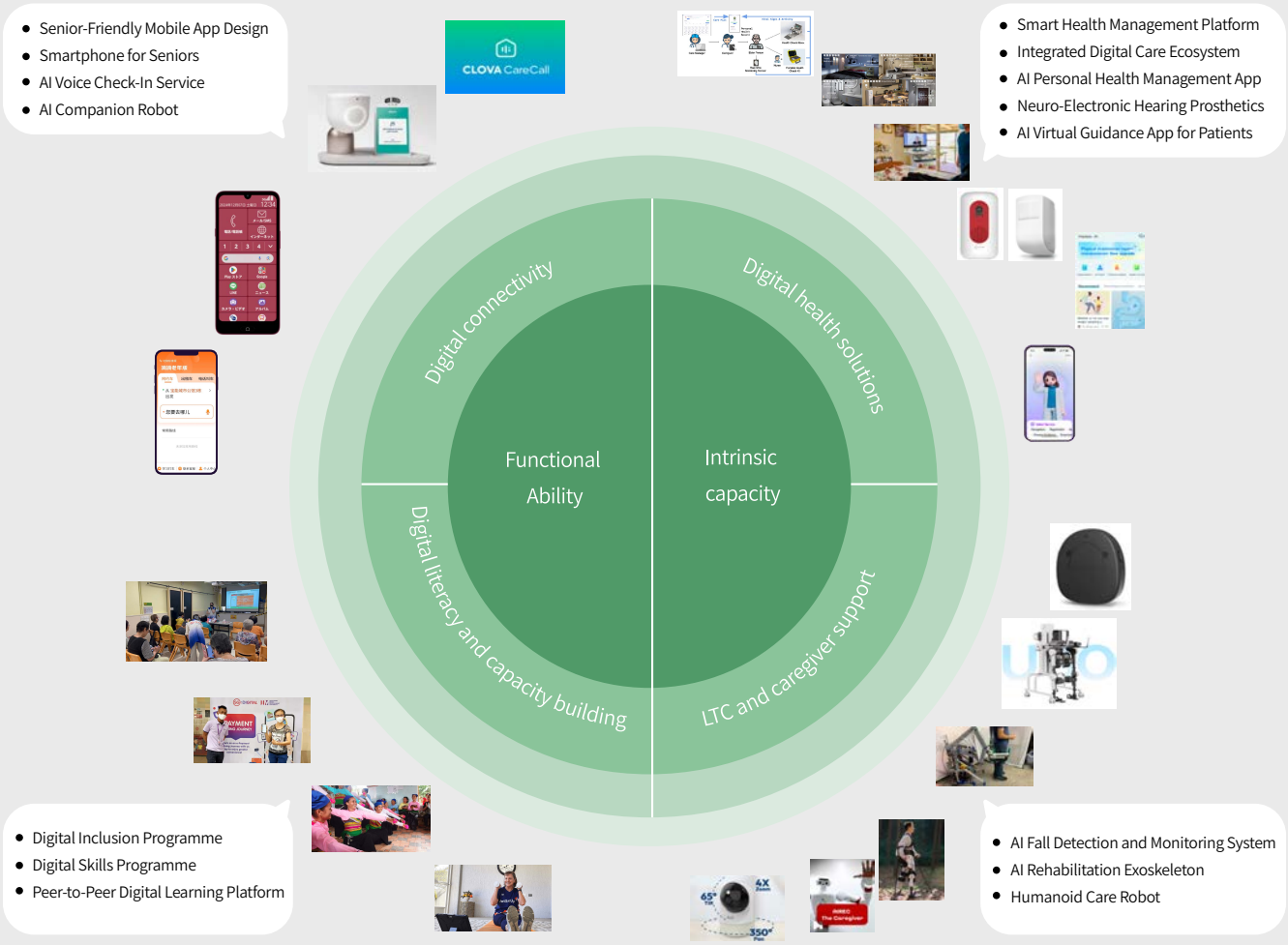
For APEC, the priority is to ensure that innovation is institutionalized rather than isolated, supported by interoperable standards, equitable financing, and clear governance frameworks, so that digital health becomes a scalable, affordable, and trusted enabler of ageing in place.

5.5.4 LTC and Caregiver Support

Examples such as exoskeleton rehabilitation robots in China, humanoid caregiving robots in Japan, and AI-powered fall detection cameras in the United States reveal how advanced technologies can augment caregiver capacity and improve safety for older adults. These cases show that robotics and AI are not designed to replace human caregivers but to complement them by taking on repetitive, labor-intensive, or high-risk tasks.

For economies facing rapid ageing and workforce shortages, investment in such technologies, paired with appropriate training, can sustain the quality of LTC. The broader lesson is that technology can preserve dignity and independence for older adults while easing the strain on families and institutions.

By doing so, economies can build resilient, people-centred ecosystems that transform ageing from a challenge into an opportunity. The ecosystems can advance the shared vision of a more open, dynamic, and resilient community under the APEC Putrajaya Vision 2040.



Seminar Summary Report

6

The APEC Seminar on Digital Solutions and Technologies for Senior Citizens' Connectivity and Healthiness was held in Beijing, China, from 17 to 19 September 2025. It was organized with two plenary days and one day of technical visits. The detailed agenda was attached in the Appendix I.

Bringing together 35 representatives from 15 economies, the seminar convened policymakers, academia, private-sector innovators, and NGOs to introduce findings, exchange experience, and identify scalable models.

6.1 Seminar Structure

Day 1 - Policy Context and Regional Frameworks

The first day established the policy context. Opening remarks were delivered by Cheng Cheng (MOST China), followed by keynote interventions from the APEC Secretariat and the ASEAN Centre for Active Ageing and Innovation, which framed population ageing as a regional opportunity for inclusive growth.

Subsequent sessions featured expert presentations from China; Japan; Republic of Korea; Malaysia; and Thailand, offering comparative insights into digital health, ICT accessibility, and economywide ageing policies.

Two panel discussions deepened the dialogue on supporting policies for digitalization and the public-private partnership programmes.

Day 2 - Research, Innovation, and Inclusive Technology

The second day focused on research, digital solutions and technologies. Morning sessions explored digital health integration, localization of lifestyle apps, intergenerational inclusion models, and assistive robotics with contributions from experts from China; Japan; Malaysia; New Zealand; and Russia. Afternoon discussions focused on inclusive technology ecosystems and gender-responsive approaches.

Day 3 - Site Visits and Technology Demonstrations

The concluding day consisted of site visits and demonstrations of frontier technologies in Beijing:

- The Future Laboratory of Tsinghua University, where participants experienced immersive design solutions and prototypes.
- China Unicom Smart Health Care Joint Innovation Laboratory and Beijing E-Town Robot 4S Flagship Store, where companies presented real-world applications of AI, IoT, and service robots for connectivity and healthy ageing.

6.2 Speakers' Key Highlights

Cheng Cheng
Multilateral Cooperation Division, Ministry of Science and Technology (MOST), China

Cheng emphasized that population ageing is a shared challenge across APEC, affecting livelihoods, development, and long-term sustainability. She highlighted that digitalization and technological innovation can bridge the digital divide, improve health, and enhance quality of life for older adults. The economy has prioritized active ageing and digital inclusion through initiatives such as Smart Health and Elderly Care, internet-based healthcare, and age-friendly adaptation projects.

She reaffirmed China's commitment to sharing experience and promoting cooperation under the APEC Putrajaya Vision 2040, calling for joint efforts among governments, research institutions, and enterprises to build "a healthier, more connected, and more sustainable Asia-Pacific community."

Emmanuel A. San Andres
Senior Analyst, APEC Policy Support Unit (PSU)

San Andres outlined how demographic change and ageing are reshaping the region, with the total population expected to decline within one decade. He warned that the shift could slow labour growth, strain pensions, and heighten fiscal pressures, urging economies to respond through inclusion, productivity, and fiscal resilience.

He recommended essential measures such as increasing productivity, universal access to healthcare, anti-ageism policies, and closing digital gaps to counteract downward economic pressure s due to demographic change. Meanwhile, he suggested technology and AI could enable preventive care, telemedicine, and lifelong learning. He concluded that innovation-driven inclusion was critical to ensure older adults live longer, healthier, and more productive lives across the Asia-Pacific.

Somsak Akksilp
Executive Director, ASEAN Centre for Active Ageing and Innovation (ACAI)

Dr Somsak framed ageing as a shared opportunity for innovation and collaboration, stressing that digital transformation must evolve alongside demographic change to benefit older persons in both urban and rural areas. Drawing on ASEAN's experience, he noted that infrastructure gaps, social barriers, and uncoordinated policies continued to limit inclusion.

He introduced the ACAI and its five-year strategy to promote inclusive economies, digital opportunity, and adaptive systems. Thailand's examples including telehealth, community apps, and active-ageing platforms, demonstrated how technology could extend care and improve quality of life. He underscored that regional cooperation and knowledge-sharing were vital to build resilient, age-inclusive societies.

Li Wang
Senior Engineer, China Academy of Information and Communications Technology (CAICT), China

Dr Wang emphasized that while ICT advances had improved livelihoods, they also revealed new inequalities for older adults. China's urban–rural digital divide had narrowed through telecom universal service programmes, yet barriers in usage persisted due to physical and cognitive limitations.

She highlighted economy-wide policies such as the Special Action Plan for Age-Friendly and Barrier-Free Transformation of Internet Applications and the Law on Building a Barrier-Free Environment, which mandated inclusive design for digital services and devices. Over 3,000 websites and apps were transformed for older adults, and 140 million age-friendly devices deployed. Dr Wang concluded that their organization sought to collaborate with APEC partners to advance inclusive, barrier-free digital ecosystems.

Jatuporn Chintungrueng
Principal Researcher, National Science and Technology Development Agency (NSTDA), Thailand

Dr Chintungrueng presented Thailand's Community Elder Care Model, which trained local caregivers to deliver home-based services across 76 provinces under the support of Nirun Smart Health Management Platform.

The model is an innovative nationwide initiative developed by the Ministry of Social Development and Human Security (MSDHS) and the Department of Older Persons (DOP). It supported older people through five dimensions, including health, social, environmental, economic, and technological, ensuring comprehensive, person-centred care. A key enabler of this model is the Nirun platform, which connects caregivers, managers, and policymakers through real-time data. Nirun is also geared towards AI-enabled tools such as health monitoring and better and effective care of elder persons.

Sheleaswani Binti Inche Zainal Abidin
Consultant Public Health Medicine Specialist, Ministry of Health Malaysia

Dr Sheleaswani presented Malaysia's experience in using digital innovation to strengthen preventive healthcare for older adults through the Influenza Immunisation Programme for Older Persons. Implemented in early February 2025, the initiative leveraged two integrated digital platforms, including MySejahtera, a mobile app for older adults to book and track vaccination appointments, and MyVAS, a web-based system for healthcare providers to record and monitor vaccine administration in real time.

By linking digital registration, data analytics, and economy-wide monitoring dashboards, Malaysia improved coverage, efficiency, and transparency in vaccination delivery. The initiative demonstrated how digital health systems can bridge the gap between technology and service delivery, ensuring that older adults benefited equitably from public health innovation.

Myo Nyein Aung
Associate Professor, Juntendo University, Japan

Prof Myo presented findings from the Digitally Inclusive Healthy Ageing Communities (DIHAC) study, a five-year cross-cultural project conducted in Japan; Republic of Korea; Singapore; and Thailand exploring how digital inclusion supported healthy ageing.

He highlighted that while infrastructure access had improved, large disparities remained in digital skills, especially among older adults. The study identified five core competencies including operational, mobile, information navigation, creative, and social skills. Prof Myo underscored that successful digital ageing policies required action at three levels: economy-wide frameworks for inclusion, community facilitation programmes, and individual empowerment. He concluded that intergenerational learning and human-centred design were key to ensuring that digital transformation enhanced connectivity, autonomy, and dignity for older adults.

Moon Jeong Choi
Head and Professor, Graduate School of Science and Technology Policy, KAIST, The Republic of Korea

Prof. Choi provided an overview of the theoretical framework of the digital divide through the lens of the social model of disability. She explained that digital transformation has disproportionately marginalized older adults, who are often required to acquire new digital skills later in life. She highlighted two key approaches to narrowing this gap: (a) offering training programs to strengthen digital literacy and (b) redesigning user experiences (UX) to be more inclusive.

Prof. Choi then introduced two recent research projects from the KAIST Aging and Technology Policy Lab. The first involves developing training programs that enable older adults to use an app designed for Demand-Responsive Transport (DRT) services in Korea. The second focuses on creating a voice-based conversational AI agent that enables older adults and individuals with visual impairments to order food using speech, thereby eliminating the need to interact with digital kiosks in restaurants and cafes. Building on these examples, she emphasized that advancements in AI agents hold great potential to empower older adults to carry out daily activities more independently in an increasingly digital world.

Chonnikan Ariyakul
Researcher, National Science and Technology Development Agency, Thailand

Ariyakul outlined Thailand's strategy to support digital inclusion for older adults through a long-term transformation plan from an analogue to a fully digital society. She explained that Thailand's ageing population was rapidly increasing, comprising three main groups, including active, homebound, and bedridden older adults. Each group faced distinct challenges in mobility, healthcare access, and social connection.

To address these needs, Thailand's 20-year digital strategy focused on five pillars: strengthening digital infrastructure, empowering community economies through technology, building an equitable and inclusive digital society, advancing e-government services, and developing a skilled digital workforce.

Ita Konita
Researcher, National Research and Innovation Agency, Indonesia

Konita outlined Indonesia's ongoing efforts and challenges in leveraging digital technology to enhance the quality of life of older persons. She noted that Indonesia's ageing population, where women form the majority facing widening digital gaps due to disparities in geography, income, and education.

To address this, Indonesia had implemented several frameworks, including the Law on the Welfare of Older Persons and the National Strategy for Older Persons, which promoted digital inclusion through integrated health, social, and economic programmes. She emphasized the need for stronger inter-ministerial coordination, affordable access, and an integrated data system to support policy implementation.

Quyen Tran
Global Older People Association Advisor, HelpAge International, Thailand

Tran outlined a practical roadmap for advancing digital inclusion among older adults across Asia. He identified five persistent challenges, including affordability, language and usability barriers, security concerns, health-related limitations, and weak policy implementation.

Highlighting Thailand's economy-wide network of over 30,000 Older People's Clubs and 3,000 Older People's Schools, he showcased how peer-to-peer learning had proven more sustainable than short-term youth-led initiatives. Tran urged economies to mainstream ageing in digital strategies, provide device subsidies and affordable broadband, promote age-friendly design, and foster regional knowledge exchange through APEC.

Mabel Du
Lead Product Manager, Tencent Sustainable Social Value Time Lab, China

Du introduced Tencent's "Tech for Good" approach, emphasizing how digital innovation could enhance dignity, safety, and social connection for China' s 300 million older adults.

Through the Tencent Sustainable Social Value Division, the company developed AI-enabled solutions such as the Time Garden pilot, connecting older adults with caregivers, volunteers, and community services in real time. Key initiatives include a smart safety network with 90% fall-detection accuracy, AI-powered hearing screening via WeChat, affordable remote-tuned hearing aids, and cognitive-health games that support early detection of decline. Tencent is also working on empathetic AI companions capable of understanding dialects and recording older adults' life stories into digital memoirs, as well as assistive devices like transfer lifts to aid mobility.

Jeung Jihong
Professor, Future Laboratory, Tsinghua University, China

Prof Jeung introduced the Aging Experience (AeX) Lab at Tsinghua University's Future Laboratory, exploring how design and digital technologies enhance the daily lives of older adults through "human augmentation."

His team studies included wearable devices, wayfinding for age-friendly cities, 3D-printed soft foods for older adults with swallowing difficulties, social robots for loneliness reduction, and VR tools for memory recall. Prof Jeung emphasized that ageing was not merely a biological process but an experiential one, and that empathy-driven design and low-cost, participatory innovation could empower older adults to live active, connected, and fulfilling lives in the digital age.

Sean Thomas Rooney
Adjunct Associate Professor, Griffith University, Australia

Adj. Assoc. Prof Rooney shared Australia's ongoing aged care reform journey, emphasizing how collaboration and digital transformation are reshaping care systems to become person-centered and sustainable.

He outlined a new Aged Care Data and Digital Strategy, a five-year, economy-wide plan co-designed by government, providers, researchers, and older Australians to integrate data, technology, and care standards. He concluded that lifelong digital and health literacy, data-informed governance, and stronger public–private partnerships were essential to ensure both efficiency and empathy in the future of aged care. Noting that technology complements the relationship between an older person and their care giver. Enhancing, not replacing, the human relationship that underpins good quality care and support.

Eduardo Toro Nahmias
Executive Director, Major Connect Foundation,Pontifical Catholic University of Chile

Toro Nahmias presented Chile's experience in accelerating digital inclusion for older adults through multisectoral collaboration.

To address generational divides, the Connecta Mayor Foundation, founded in 2020 by the Pontifical Catholic University of Chile, had united government, academia, business, media, and NGOs to empower older adults through technology. It operated three lines of work, including digital skills training, inclusive technology design, and cultural change.

Siti Anom Binti Ahmad
Professor, Control System and Signal Processing Research Centre, Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Putra Malaysia

Prof Ahmad shared Malaysia's efforts to leverage AI and digital technologies to address the challenges of population ageing and strengthen public health systems.

Her research integrated biomedical engineering, signal processing, and gerontechnology to develop user-centered, AI-enabled systems that promote healthy and independent ageing. Key initiatives included an economy-wide digital literacy programme teaching older adults how to use smartphones, communication and navigation apps, e-wallets, and online safety tools. It recently expanded to cover fraud and scam prevention, and an IoT-based healthcare monitoring system developed at MyAgeing® for seamless home-to-hospital data integration and real-time health analysis.

Weiwei Zhang
Lecturer, Beijing University of Posts and Telecommunications, China

Dr Zhang presented her research to highlight how empathetic and inclusive design could restore agency and confidence among older adults in an AI-driven world.

Drawing from three case studies, she demonstrated this principle in practice: a fall-detection camera system co-designed with Tencent that allows older adults to control privacy settings through voice commands; a wearable jewelry device for menopausal women that discreetly monitors biometric signals and aids emotional regulation through calming interactions; and an AI conversational agent co-developed with older adults themselves, trained on over 10,000 real dialogues to reflect authentic older people voices and wisdom.

Yingpeng Qiu
Associate Research Fellow, China National Health Development Research Center

Dr Qiu presented how digital technologies could support ageing populations and strengthen health systems across APEC economies. He highlighted that digital health innovation such as AI, IoT, telemedicine, and smart home systems, had become a crucial pillar for healthy ageing strategies.

Dr Qiu proposed four key directions forward: cross-sector collaboration among health, social, and technology actors; co-funding mechanisms to move beyond short-term pilots; stronger data and quality standards for scaling innovations; and active participation of older adults and communities in design and evaluation. He concluded that realizing the potential of digital healthy ageing required more than technology. It demanded systemic reform to ensure inclusivity, equality, and long-term sustainability across the Asia-Pacific region.

Arimi Fitri Mat Ludin
Associate Professor, Faculty of Health Sciences,Universiti Kebangsaan Malaysia,
Chairperson of Center for Healthy Ageing & Wellness

Prof Arimi shared Malaysia's experience in developing culturally-tailored digital lifestyle apps for older adults. He emphasized the importance of interdisciplinary collaboration between health scientists, IT developers, and communities to translate research into practical digital health tools that respected local cultures and empowered older adults to adopt healthy behaviours.

Anna Kontsevaia
Deputy Director, National Medical Research Center for Therapy and Preventive Medicine of MoH of Russia

Prof Kontsevaia highlighted the critical role of digital scanning and data-driven assessment in creating healthier and age-friendly urban environments.

Drawing on research from Russia and international studies, she noted that neighborhood design had a measurable impact on public health and ageing outcomes. Her team developed a digital tool to evaluate municipal infrastructure based on its health impact, ranking cities by environmental and behavioral risk factors. These assessments had informed local policy and urban planning decisions, illustrating how digital evidence could guide healthier cities.

Saima Qutab
Lecturer, Business School, Information Systems & Operations Management, University of Auckland, New Zealand

Dr Qutab shared insights on digital inclusion of older adults in New Zealand, emphasizing the vital role of family and community in bridging generational digital divides.

Her study highlighted that many older New Zealanders, particularly Māori and Pacifica elders, experienced gaps in digital inclusion. She proposed a family-centered and culturally grounded model where learning was mutual: elders gain digital skills from younger family members while imparting cultural wisdom and values in return. She cited successful examples to demonstrate that intergenerational learning and community-led engagement could foster confidence, reduce isolation, and strengthen cultural continuity.

Tamon Miyake
Junior Researcher, Waseda University, Japan

Prof Miyake presented Waseda University's pioneering work on AI-powered assistive robotics designed to support humans in daily life, particularly in caregiving and independent living.

Building on five decades of robotics innovation, the team advanced the AI-driven robot for embrace and care (AIREC). The general-purpose robot combined physical intelligence with conversational AI to perform complex caregiving tasks such as repositioning, dressing, feeding, and rehabilitation. Using imitation learning and adaptive joint control, the robot could adjust grip strength, predict friction, and respond empathetically to human cues during interaction.

James Luo
Chief Client Officer, NielsenIQ China

Luo highlighted consumer research showing that Chinese older adults were increasingly active in digital commerce and health tracking.

He proposed that brands and policymakers shall embrace a “silver economy” strategy focused on accessibility, nutrition precision, affordability, and trust. This strategy could create inclusive products, intuitive digital tools, and reliable services that empowered older adults to live longer, healthier, and more independent lives.

José Francisco David Parodi García
Director of the Research Center for Ageing of the Faculty of Human Medicine, University of San Martin de Porres, Peru

Parodi García described how the digital divide widens health inequalities among older adults. This is particularly evident in rural areas of Peru, where lower life expectancy, limited access to healthcare, and poor digital literacy and connectivity exacerbate what he called the "health divide."

He advocated for "humanizing technology" and adaptive digital literacy to bridge these gaps. His framework spaned three levels: micro (empowering self-care through mHealth and telemedicine), meso (improving continuity of care via interoperable systems and AI tools), and macro (strengthening digital health governance and ethical standards).

Ning Song
Lead Investor, WiseDiag Technology, China

Dr Song introduced WiseDiag Technology's mission to use trustworthy AI to make healthcare more precise, personal, and universally accessible.

Its flagship product, Haoban AI, functioned as a “pocket doctor,” offering real-time consultations, risk assessments, report interpretation, and health monitoring for individuals and families, especially older adults with chronic conditions, by integrating clinical reasoning, medical data analysis, and continuous personal health memory. The technology has served over ten million users and supports local public health programmes in China, empowering family doctors and improving chronic disease management.

Sam Han
Partner, Union Communications Hong Kong Limited,Hong Kong, China

Han summarized lessons from APEC economies, emphasizing cross-sector synergy, affordability, and human-centred design as the foundations of a sustainable digital-ageing ecosystem.

Qibin Yang
Project Officer, The Federation of New Territories Youth Foundation Limited, Hong Kong, China

Yang shared the organization's experience in empowering grassroots elderly through the capacity building programme.

Serving districts such as Tsuen Wan, Kwai Tsing, and Yuen Long, the programme offered smartphone training, digital government service guidance, and internet safety education for low-income older adults. He highlighted key barriers faced by elders, including low digital literacy, fear of scams, outdated devices, and reluctance to seek help, as well as institutional challenges like limited manpower and diverse learner needs. To address these gaps, he emphasized youth participation, patience and empathy in teaching, and linking digital skills to daily life.

Sarun Sumriddetchkajorn
Board Member, Institute of Public Policy and Development, Thailand

Sumriddetchkajorn shared Thailand's integrated approach to supporting its ageing population through digital connectivity and cross-ministerial collaboration.

Guided by the National Economic and Social Development Plan (NESDB), Thailand advanced elderly welfare across key milestones, including digital platforms, smart cities, and social equality. He highlighted the Thai People Map and Analytics Platform (TPMAP), which consolidated data from 34 million citizens to identify and address older adults' needs in five dimensions: health, income, living conditions, education, and social participation. This data-driven approach reduced elderly deprivation cases by 83% in one year. He concluded that digital infrastructure, inter-agency collaboration, and data-informed policymaking were key to ensuring equitable, efficient, and dignified ageing in Thailand.

Roxana Patricia Ruiz Vallejos
CEO and Founder, Older Adults for Digital Inclusion, Peru

Ruiz Vallejos shared her vision of technology as a tool to strengthen autonomy, dignity, and social connection among older people. Through creative, empathetic learning environments and peer-to-peer education, the organization helped older people use everyday devices to simplify tasks, enhance communication, and engage with government services.

She emphasized three priorities: fostering economic empowerment through digital tools, expanding community-based networks such as neighborhood WhatsApp groups, and integrating digital inclusion into Peru's ageing policy.

Carlos Román Aránguiz
Executive Director SeniorLab UC – Social Innovation Lab on Longevity and Aging at the Pontifical Catholic University of Chile

Aránguiz emphasized the importance of embracing the longevity economy as a strategic framework to connect ageing and technology for inclusive development.

Drawing on Chilean experience, he highlighted key lessons: small pilots must scale; public-private partnership builds impact; inclusion requires both technology and human touch; and success should be measured by continued use, not just training numbers. He shared examples of tech-enabled solutions from telehealth to social platforms, and urged APEC economies to foster innovation-friendly policies, collaborative networks, and a proactive mindset.

Ligang Ren
Chief Technology Officer,Government-Enterprise Cluster, China United Network Communications Corporation Beijing Branch

Dr Ren introduced China Unicom's Smart Elderly Care Platform, designed to build a connected ecosystem for ageing services through digital innovation. The platform integrated smart devices, data systems, and tailored solutions for three groups of older adults, including functionally impaired older adults, advanced-age older adults, and active elders. Its “one service platform with three products” model included a smart mattress for real-time health monitoring, a radar sensor for fall detection, and a one-touch alarm for safety tracking.

Dr Ren emphasized the system's interoperability, welcoming external partners to integrate their AI, robotics, and hardware solutions. He concluded by inviting APEC partners to join this open, data-driven ecosystem to co-develop scalable smart ageing solutions for a better, connected later life.

Adelia Oktarina
Researcher, National Research and Innovation Agency, Indonesia

Oktarina shared her social and cultural perspective on women and elderly care in Indonesia. She highlighted Indonesia's efforts to modernize its care system through the Smart Village Programme, which utilized village funds for digital data systems, village ambulances, and emergency “panic button” services for the elderly, pregnant women, and people with special needs (serious illnesses or special requirements).

She emphasized that the modernization of public services, particularly healthcare, should be inclusive so that it is accessible to all economic strata of society and regions, not only in cities but also in villages and remote areas or areas with difficult accessibility.

Tran Bich Thuy
Director, HelpAge International, Viet Nam

Thuy discussed Viet Nam's rapidly ageing population and the widening digital divide among older adults. Despite widespread internet use, only a small proportion of older adults use smartphones or digital services due to low affordability, limited skills, and fear of technology or scams. To address this, HelpAge integrated digital literacy training into Viet Nam's community-based networks that combined health, care, livelihood, and social activities.

Thuy emphasized that closing the digital gap required patience, empathy, age-friendly tools, and inclusive community models. She urged APEC to embed ageing and digital inclusion into policies and regional cooperation frameworks.

Christian Joy Pattawi Cruz
Assistant Professor, Population Institute,University of the Philippines

Prof Cruz presented findings from the Longitudinal Study of Ageing and Health in the Philippines, the economy's first study on ageing. The study revealed that older Filipinos were generally in poor health, facing high rates of chronic diseases, functional disabilities, and poor oral health.

While ICT access was improving, older adults remained digitally excluded. She concluded by calling for stronger integration of digital tools and data-driven research to support evidence-based policymaking on ageing.

Siti Mazidah Haji Mohamad
Director of Centre for Advanced Research, Assistant Professor of Faculty of Arts and Social Sciences, Universiti Brunei Darussalam

Prof Siti Mazidah highlighted Brunei Darussalam's fast-approaching demographic transition and the economy's efforts to build a “successful ageing” agenda.

She explained that the economy faced the challenge of ageing amid low fertility and a welfare-based economy, requiring urgent cross-sector collaboration. Through the Centre for Advanced Research, she promoted interdisciplinary studies on family, social work, digital transformation, and health, alongside projects such as the domestic survey on the elderly population. She concluded that Brunei Darussalam's path to “successful ageing” must combine research, education, and community engagement to align with SDGs.

6.3 Seminar's Emerging Themes

Drawing from presentations and panel discussions over the two plenary days, the seminar revealed strong convergence among APEC economies on the urgency of advancing digital and technological inclusion, and healthy ageing through innovation and collaboration.

Speakers consistently emphasized that digital transformation is not an isolated technical issue but a societal transition. It requires cross-sector collaboration, inclusive design, and coherent policy frameworks.

The insights from the seminar can be grouped under four interrelated themes, aligned with the analytical dimensions of this report.

6.3.1 Digital Connectivity

Speakers emphasized that connectivity must evolve from a physical access to a functional accessibility. Several economies illustrated that policies and design standards have begun to bridge this gap.

- China's Ministry of Science and Technology and the China Academy of Information and Communications Technology presented economy-wide efforts to develop barrier-free digital transformation standards and “Older User Mode” features in apps, enabling older users to navigate smartphones and e-services confidently.
- Thailand shared its Thai People Map and Analytics Platform, a data-driven tool integrating information on health, income, education, and social participation for 34 million citizens. It can precisely identify vulnerable elderly groups and target assistance.
- Japan's and Korea's experiences showed that linking smart-city initiatives, IoT infrastructure, and ageing-in-place policies can turn connectivity into a social safety net rather than a mere technical layer.

Speakers also noted that affordability, awareness, and usability remain major barriers, particularly for low-income or rural older adults. Further, they called for regional standards on age-friendly design and stronger collaboration between telecommunications firms, governments, and communities to ensure that every connection translates into meaningful participation.

6.3.2 Digital Literacy and Capacity Building

Across sessions, participants agreed that skills alone do not guarantee inclusion. Motivation, confidence, and relevance are equally critical.

- Malaysia's Seniors Digital Literacy Modules, covering smartphone use, e-wallet safety, communication and mobility apps, and online-scam prevention, illustrated how curricula tailored to everyday life can sustain engagement.
- Hong Kong, China, presented community outreach models targeting 15,000 grass-roots older adults over two years through peer mentoring and NGO collaboration. Their key lesson: link digital training to daily routines such as clinic visits or online health bookings, so that learning feels immediately useful.
- Peru; Thailand; and Viet Nam reinforced the importance of intergenerational and community-based learning, where peer coaches and local clubs create trusted spaces for practice and confidence building.

Speakers urged APEC economies to view literacy as a continuum of empowerment, from first use to lifelong learning, and to measure outcomes by sustained, confident technology use in older adults' everyday lives.

6.3.3 Digital Health Solutions

Speakers urged APEC economies to view literacy as a continuum of empowerment, from first use to lifelong learning, and to measure outcomes by sustained, confident technology use in older adults' everyday lives.

- Malaysia's Ministry of Health presented precision ageing initiatives using IoT sensors and data analytics to personalize care, connect home monitoring to clinics, and optimize resource use.
- China highlighted the WiseDiag Haoban AI "pocket doctor," Smart Elderly-Care Ecosystem (China Unicom), and Aging Experience Lab (Tsinghua University), demonstrating how integrated AI and sensor systems can enhance diagnosis, safety, and emotional wellbeing.
- Russia provided further insight into how digital health mapping and neighbourhood indices could identify risk clusters such as fast-food density, pollution, and lack of green spaces, enabling early policy intervention for healthier ageing.
- Brunei Darussalam presented emerging research linking health data integration and community education. Its approach framed "successful ageing" as a combination of wellbeing, productivity, and lifelong learning supported by digital tools.

Speakers from Australia; Chile; and Peru highlighted that scaling these innovations requires interoperable data systems, ethical safeguards, and sustainable business models. Governments were encouraged to create regulatory sandboxes that allow pilot programmes to mature into integrated local or regional health ecosystems.

6.3.4 Long-Term Care and Caregiver Support

Discussions on LTC converged on a shared principle: technology should empower caregivers.

- China Unicom presented its Smart Elderly-Care Ecosystem, integrating radar-based fall detection, smart mattresses, and data platforms to support older adults at home and in institutions. By linking AI, IoT, and cloud data, the system helps families and professionals monitor wellbeing in real time.
- Japan and Korea described programmes incorporating robotics and ICT tools into caregiving to mitigate labour shortages, while ensuring safety and dignity.
- Indonesia presented Smart Village initiatives integrating panic-button emergency alerts and digital-health records for rural elderly and pregnant women, exemplifying how local infrastructure can complement community compassion.

Participants emphasized that the future of LTC lies in hybrid models combining human empathy with technological efficiency. Training caregivers to use digital tools safely and ethically was viewed as essential to sustaining workforce wellbeing and care quality across the region.

6.4 Summary and Next Steps: Building a Connected and Healthy APEC

Building on the emerging themes outlined above, the seminar consolidated key takeaways and charted practical directions for APEC's future collaboration. Participants agreed that digital transformation is no longer peripheral to ageing policy, it is central to how economies will ensure connectivity and healthiness in later life. Across the two days of presentations and dialogue, participants affirmed that digital solutions and technologies can and must serve as both a connector and an equalizer for ageing societies.

Four priorities were summarized to guide APEC's next phase of collaboration:

1. **Closing connectivity gap:** Affordable broadband, accessible devices, and barrier-free digital ecosystems remain the foundation for inclusion.
2. **Building digital literacy and confidence:** Sustained, community-based learning structures that combine families, civil society, and the private sector are essential.
3. **Scaling digital health innovation:** From telemedicine and AI diagnostics to IoT-based home monitoring, innovation must be integrated into financing, regulation, and workforce development.
4. **Supporting LTC and caregivers:** Robotics, smart-home systems, and data-driven care platforms can enhance both independence and quality of life.

Participants also emphasized that APEC's next phase of work should move from dialogue to demonstration, translating insights into pilot initiatives, cross-economy partnerships, and shared data frameworks. Suggested areas for continued cooperation include:

- Regional policy coordination on age-friendly standards and ICT accessibility.
- Capacity-building workshops for policymakers and practitioners to exchange tools and methodologies.
- Collaborative research on the socioeconomic impact of digital ageing.
- Public–private partnerships to accelerate innovation through sandboxes and inclusive financing mechanisms.

By combining these efforts and working together, APEC can build a connected and healthy region for older adults.

Policy Recommendations

From Diagnosis to Action: Embedding Digital Solutions and Technologies in APEC's Demographic Agenda

The preceding chapters make clear that digital solutions and technologies are no longer peripheral but central to the way APEC economies must respond to rapid demographic change.

Yet progress remains uneven across the region, reflecting differences in infrastructure readiness, digital skills, system coordination, and inclusion. Moving from diagnosis to action therefore requires a coherent strategy that embeds ageing considerations into APEC's demographic and ageing agendas, ensuring that innovation translates into practical progress in the lives of older adults.

7

7.1 Closing the Infrastructure, Connectivity, and Affordability Divide

Connectivity is the foundation of functional ability. While leading economies have achieved near-universal broadband, others still struggle with rural coverage, affordability, and device accessibility. Even when devices are available, ongoing data costs remain prohibitive for many older adults, particularly in rural or low-income communities.

APEC should prioritize:

- Universal service obligations for telecom operators, with subsidies for rural last-mile connections, affordable age-friendly packages, and targeted data allowances for low-income older adults.
- Age-friendly design mandates for digital platforms and devices, ensuring that accessibility is not optional, but built into all mainstream services.
- Cross-border sharing of technical and interoperability standards (e.g., font scaling, simplified navigation, and voice-enabled access) so that lessons from pioneers like China; Japan; and Singapore can accelerate adoption elsewhere.

7.2 Embedding Digital Literacy into Lifelong Learning

Digital literacy is not a one-off skill but a lifelong process. Case studies from Hong Kong, China; New Zealand; Peru; and Singapore, illustrate that confidence, trust, cultural relevance, and intergenerational support are as important as technical training. Peer-to-peer and intergenerational learning, in particular, have proven highly effective, as older adults often feel more comfortable learning at their own pace from peers or with the support of younger "digital buddies."

APEC should prioritize:

- Institutionalizing older people digital training within economywide education and ageing strategies, moving beyond pilots to system-wide programmes.
- Scaling intergenerational and peer-to-peer learning models, which build not only technical capacity but also social capital and cross-generational understanding.
- Integrating digital literacy into community services, such as libraries, older people centres, and NGOs, so that training is embedded in the daily environments of older adults.

7.3 Integrating Digital Health into Economy-wide Systems

Innovation in telemedicine, monitoring, and AI-driven health tools is abundant across APEC, but system fragmentation persists. Initiatives in Australia; China; Malaysia; Japan; and Republic of Korea demonstrate how digital health can enhance preventive care, remote monitoring, and service efficiency when embedded within coordinated systems.

APEC should prioritize:

- Mandating interoperability standards for e-health records and platforms to enable seamless care across providers.
- Leveraging regional cooperation for evidence sharing, joint evaluation of emerging technologies, and regulatory sandboxes to test cross-border applications.
- Linking digital health services to economywide insurance and financing frameworks.

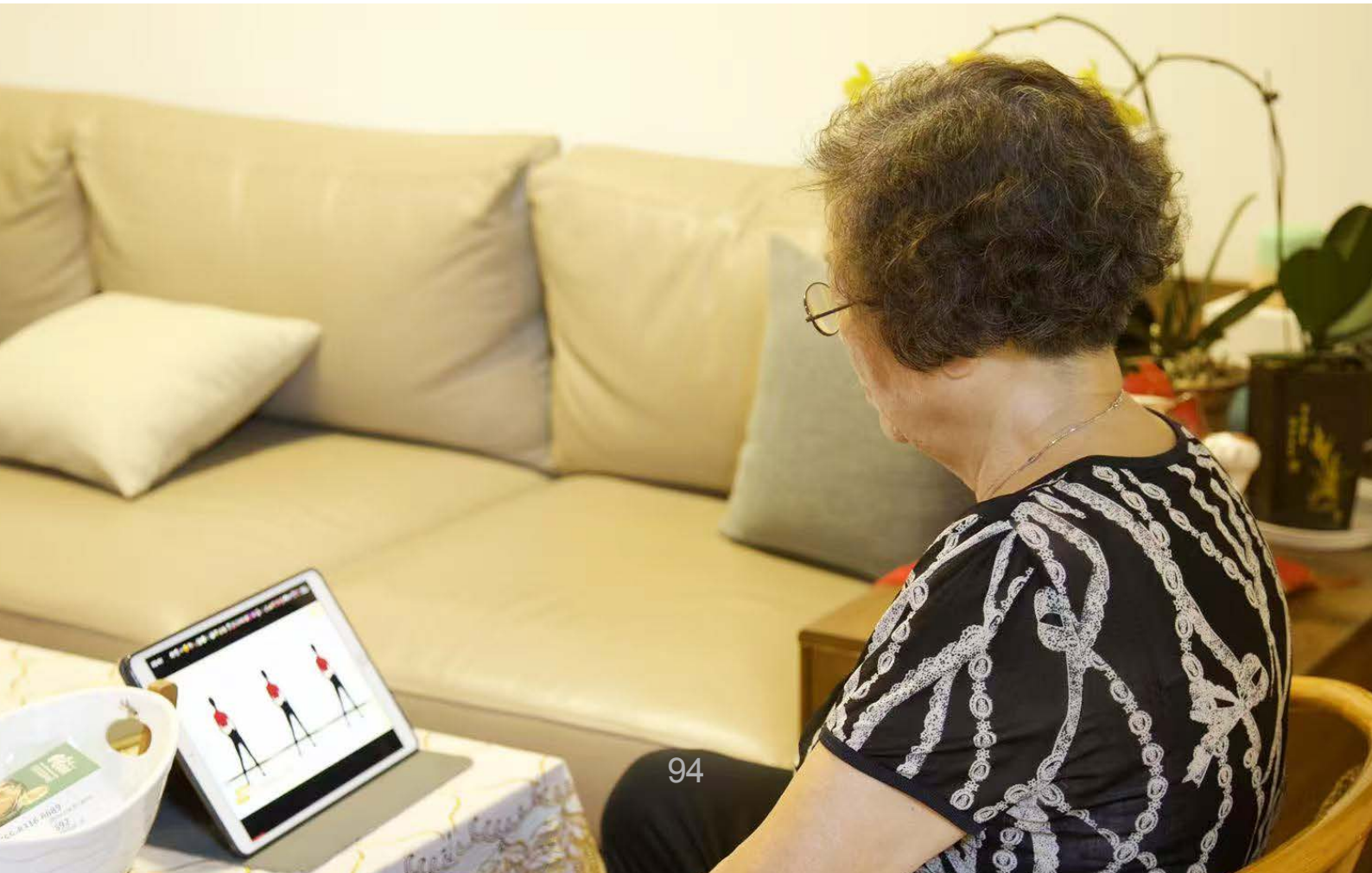
7.4 Supporting Caregivers through Digital Ecosystems

Caregiver support remains the weakest link in many APEC economies. The reliance on unpaid family care without systemic backing risks both inequity and unsustainability. Cases from some economies underscored that caregiving is still largely performed by women and often older women, making digital support systems both a gender and an ageing imperative.

APEC should prioritize:

- Expanding digital support platforms, enabling families to access training, counseling, and flexible services.
- Deploying smart-home and monitoring technologies that reduce routine burdens, provide peace of mind, and improve safety.
- Recognizing caregiver contributions within policy frameworks, linking digital tools to allowances, insurance benefits, or pension credits.

This approach reframes digital innovation not only as a tool for older adults but as an enabler of sustainable caregiving systems.



Conclusions

The demographic transformation unfolding across APEC presents both one of the region's greatest challenges and its most powerful opportunities. As longevity increases and populations age, economies are being called upon to rethink how health, technology, and inclusion can intersect to sustain functional ability, intrinsic capacity, and social participation for all older adults.

This report demonstrates that digital solutions and technologies are no longer supplementary, they are foundational to the future of healthy and inclusive ageing. Across APEC economies, connectivity, literacy, digital health, and LTC are converging into a new ecosystem of "digital healthy ageing." The lessons drawn from comparative analysis, best practices, and the APEC seminar converge on a shared understanding: digital solutions and technologies can serve as a bridge between demographic reality and social aspiration when guided by inclusive policy, people-centred design, and collaborative governance.

Looking ahead, APEC has a unique convening power to transform these insights into collective action. By embedding digital and technological strategies into economywide reforms and regional cooperation, fostering cross-economy learning and sharing, piloting scalable models, and developing shared policy frameworks, APEC can ensure that its older adults are not left behind, but instead stand at the forefront of a more connected, healthy, inclusive, dignified, and sustainable Asia-Pacific future.

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Appendix I: Seminar Agenda

September 17 (Wednesday)

09:30 – 09:35	Moderator Introduction
09:35 – 09:45	**Cheng Cheng,** Multilateral Cooperation Division, Department of International Cooperation, Ministry of Science and Technology (MOST), China
09:45 – 10:00	Addressing Demographic Change in APEC economies **Emmanuel A. San Andres,** Senior Analyst, Policy Support Unit, APEC Secretariat
10:00 – 10:15	Healthy Ageing in a Digitally Connected Asia-Pacific: Insights from ASEAN's Active Ageing Journey **Somsak Akksilp,** Executive Director, ASEAN Centre for Active Ageing and Innovation
10:15 – 10:30	Promoting Barrier-free ICT Accessibility, and Helping the Elderly Bridge the Digital Divide **Li Wang,** Senior Engineer, Director of Digital Management Research Department, Institute of Industry and Planning, China Academy of Information and Communications Technology
10:30 – 10:45	Group Photo & Break
10:45 – 11:00	Elder Community Care: Thailand Case Study **Jatuporn Chintungrueng,** Principal Researcher, National Science and Technology Development Agency, Thailand
11:00 – 11:15	From Clicks to Health Care: Malaysia's experience in Influenza Immunisation for Older Adults **Sheleaswani Binti Inche Zainal Abidin,** Consultant Public Health Medicine Specialist, Ministry of Health Malaysia

11:15 – 11:30	Policy Perspectives and Older Persons' Individual Values from Digitally Inclusive Healthy Ageing Communities (DIHAC): A Cross-cultural Study in Japan, Republic of Korea, Singapore, and Thailand **Myo Nyein Aung,** Associate Professor, Department of Global Health Research, Graduate School of Medicine, and Faculty of International Liberal Arts, Juntendo University, Japan
11:30 – 11:45	Digital Empowerment of Older People in the Era of AI: The Korean Experience **Moon Jeong Choi,** Head and Professor, Graduate School of Science and Technology Policy, Korea Advanced Institute of Science & Technology, Republic of Korea
11:45 – 14:00	Break
14:00 – 15:15	**Policy Panel Discussion: Supporting Policies for Older Adults' Digitalization** Moderator: **Chonnikan Ariyakul,** Researcher, National Science and Technology Development Agency, Thailand Panelists: ・**Mabel Du,** Lead Product Manager, Tencent Sustainable Social Value Time Lab, China ・**Ita Konita,** Researcher, National Research and Innovation Agency, Indonesia ・**Quyen Tran,** Global Older People Association Advisor, HelpAge International, Thailand
15:15 – 15:25	**Research Center for Ageing User Experience and Service System Design** **Jeung Jihong,** Professor, Principal Investigator, The Future Laboratory, Tsinghua University, China
15:25 – 15:40	Break
15:40 – 17:00	**Capacity Building Discussion: Public-Private Partnership for Tech-empowerment of Older Adults** Moderator: **Sean Thomas Rooney,** Adjunct Associate Professor, Faculty of Health Service Management at Griffith University, Australia; Non-Executive Director, McLean Care Panelists: ・**Carlos Román Aránguiz,** Executive Director SeniorLab UC – Social Innovation Lab on Longevity and at the Pontifical Catholic University of Chile ・**Siti Anom Binti Ahmad,** Professor, Control System and Signal Processing Research Centre, Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Putra Malaysia ・**Weiwei Zhang,** Lecturer, School of Digital Media & Design Arts, Beijing University of Posts and Telecommunications, China
17:00 – 17:20	Wrap up on Day 1

September 18 (Thursday)

09:00 – 09:05	Moderator Introduction
09:05 – 09:20	Digital Healthy Ageing in Asia Pacific: Potentials and Ways Forward **Yingpeng Qiu,** Associate Research Fellow, China National Health Development Research Center
09:20 – 09:35	Developing Culturally-Tailored Lifestyle Apps for Seniors: A Researcher's Perspective **Arimi Fitri Mat Ludin,** Associate Professor, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Chairperson of Center for Healthy Ageing & Wellness
09:35 – 09:50	Digital Scanning of the City Infrastructure for Creating Healthy and Senior-friendly Methodological Environment **Anna Kontsevaia,** Deputy Director, National Medical Research Center for Therapy and Preventive Medicine of MoH of Russia
09:50 – 10:05	Bridging Generations: Role of Family and Community in Digital Inclusion of the Elderly **Saima Qutab,** Lecturer, Business School, Information Systems & Operations Management, University of Auckland, New Zealand
10:05 – 10:20	AI Robot Assisting Humans in Daily Life **Tamon Miyake,** Junior Researcher, Waseda University, Japan
10:20 – 10:50	Break
10:50 – 11:05	Old is Gold: The Chinese Way of Ageing **James Luo,** Chief Client Officer, NielsenIQ China
11:05 – 11:20	From the Digital Divide to the Health Divide: A Challenge for Healthy Aging in Latin America and the Caribbean **José Francisco David Parodi Garcia,** Director of the Research Center for Ageing of the Faculty of Human Medicine, University of San Martin de Porres, Peru
11:20 – 11:35	Transformative Breakthroughs in Large-Scale AI Models: Redefining the Paradigm of Medical Diagnosis **Ning Song,** Lead Investor, WiseDiag Technology, China

11:35 – 11:50	Empowering Older Adults in Digital Era: Lessons and Policy Pathways from APEC Economies **Sam Han,** Partner, Union Communications Hong Kong Limited, Hong Kong, China
11:50 – 14:00	Break
14:00 – 15:00	**Capacity Building Discussion: Accessible and Inclusive Digital Technologies for Older Adults** Moderator: **Sam Han,** Partner, Union Communications Hong Kong Limited, Hong Kong, China Panelists: · **Carlos Román Aránguiz,** Executive Director SeniorLab UC – Social Innovation Lab on Longevity and at the Pontifical Catholic University of Chile · **Qibin Yang,** Project Officer at The Federation of New Territories Youth Foundation Limited, Consultant at Union Communications Hong Kong Limited, Hong Kong, China · **Roxana Patricia Ruiz Vallejos,** CEO and Founder, Older Adults for Digital Inclusion, Peru · **Sarun Sumriddetchkajorn,** Board Member, Institute of Public Policy and Development, Thailand
15:00 – 15:15	China Unicom Smart Elderly Care: Connecting a Better Later Life & Sharing Experiences with APEC Economies **Ligang Ren,** Chief Technology Officer, Government-enterprise Cluster, China United Network Communications Corporation Beijing Branch
15:15 – 15:30	Break
15:30 – 16:40	**Capacity Building Discussion: Women' s Endeavors for Older Adults** Moderator: **Christian Joy Pattawi Cruz,**Assistant Professor, Population Institute, University of The Philippines Panelists: · **Adelia Oktarina,** Researcher, National Research and Innovation Agency, Indonesia · **Tran Bich Thuy,** Director, HelpAge International, Viet Nam · **Siti Mazidah Haji Mohamad,**Director, Centre for Advanced Research and Assistant Professor, Faculty of Arts and Social Sciences, Universiti Brunei Darussalam
17:00 – 17:20	Wrap up of Day 2

September 19 (Friday) – Site Visits

09:30 – 12:00	Showroom Visit at Future Laboratory, Tsinghua University
14:00 – 17:00	Showroom Tour, Company Presentation, and Case Studies Sharing at China United Network Communications Corporation Beijing Branch
	Showroom Visit & Company Presentation at Beijing E-Town Robot 4S Flagship Store (Robot Mall)

Appendix II: Expert Interviewees

No.	Name	Title	Economy
1	Christian Joy Pattawi Cruz	Assistant Professor, Population Institute, University of The Philippines	The Philippines
2	Emiko Masaki	Principal Health Specialist, Asian Development Bank	International Organization
3	Jatuporn Chintungrueng	Principal Researcher, National Science and Technology Development Agency	Thailand
4	Kyaw Min Soe	Head of Policy Advocacy, IEC and Capacity Building Section, ASEAN Center for Active Ageing and Innovation	Thailand
5	Myo Nyein Aung	Associate Professor, Department of Global Health Research, Graduate School of Medicine, and Faculty of International Liberal Arts, Juntendo University	Japan
6	Qibin Yang	Project Officer, The Federation of New Territories Youth Foundation Limited	Hong Kong, China
7	Quyen Tran	Global Older People Association Advisor, HelpAge International	Thailand
8	Saima Qutab	Lecturer, Business School, Information Systems & Operations Management, University of Auckland	New Zealand
9	Sean Thomas Rooney	Adjunct Associate Professor, Faculty of Health Service Management at Griffith University, Australia; Non-Executive Director, McLean Care	Australia
10	Siti Anom Binti Ahmad	Professor, Control System and Signal Processing Research Centre, Department of Electrical and Electronic Engineering, Faculty of Engineering, Universiti Putra Malaysia	Malaysia
11	Tran Bich Thuy	Director, HelpAge International	Viet Nam

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