

Digitalising the built environment for all generations: A new paradigm for equity and inclusive age-friendly cities and communities

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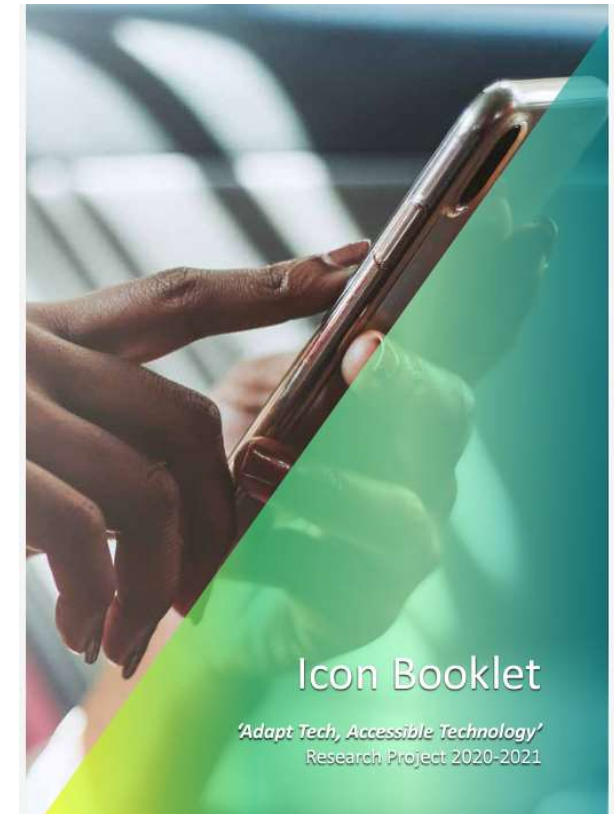
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Adapt Tech, Accessible Technology (2020-)


1. **Project Website:** <https://www5.open.ac.uk/health-wellbeing/projects/adjust-tech-accessible-technology-atat>
2. **Podcast** 'Design for Age-Doing Co-design better' (Spotify, Soundcloud, Podbean)
3. **Writings:**
 1. Written evidence to UK Covid-19 committee(s)
 2. Cited in House of Lords Covid-19 Committee (2021). [Beyond Digital: Planning for a Hybrid World](#). 1st Report of Session 2019-21. Published 21st April 2021.
 3. Blogs – Ageing Issues (British Society of Gerontology)
 4. Book Chapter: Marston, H.R., Morgan, D.J., [...] Nicholson, J. (2023) Employing Citizen Science to understand the contemporary needs for older adults accessing and Using technology in a pandemic. Ch 29, Part 8. In: A. Urbaniak & A. Wanka (Eds.) International Handbook of Participatory Approaches in Ageing Research. (1st Edition). Routledge. <https://doi.org/10.4324/9781003254829>
4. **Icon Booklet:** In English and Welsh




Adran 1 Cyfathrebu


Mae'r holl eiconau isod yn cynrychioli gwahanol ddulliau cyfathrebu y cechw hyd iddyn nhw ar eich ffôn clyfar.


 **Ffôn**
Gwneud galwad ffôn.

 **Messenger**
Anfon neges trwy Facebook Messenger.

 **WhatsApp**
Gwneud galwad ffôn, gyrru neges neu wneud galwad fideo.


 **Neges Destun**
Anfon negeseuon testun (SMS).

 **E-bost (Outlook)**
Mynediad at eich negeseuon e-bost trwy eich cyfrif Hotmail.


 **Gmail (Google)**
Mynediad at eich negeseuon e-bost trwy eich cyfrif Google.

Section 7 General day-to-day activities


The icons below represent different functions/actions that you may wish to use.


 **Camera**
Take a photograph on your phone.


 **Calculator**

 **Phone Settings**
Settings for your phone. Change the ring/message tone, colour scheme and the size of text.


 **Google**
Search the internet.


 **Google Play Store**
Download a new App from the Google Play Store – if you have an Android phone.


 **Google Photos (Android)**
Google can store your photos so you can view them on any device you log in to - Phone, Tablet or computer.


 **Apple Photos (iPhone/iPad)**
Apple can store your photos so you can view them on any device you log in to - Phone, Tablet or computer.


Section 7 General day-to-day activities (Continued)

Clock
Set Alarms on your phone. 

Torch
Enables the flash on your camera to be used as a torch. 

Note Pad
Make notes/reminders on your phone with this App. 

Apple Store
iPhone users can download Apps from the Apple Store. 

DPD
Track your parcels dispatched by DPD and adjust or re-arrange your delivery time, date or address. 

Hermes
Track your parcels dispatched by Hermes. 

Age-friendly Cities & Communities (AFCC)



World Health Organization AFCC Model (2007)

- 8 domains
- Was **not** created/defined in evidence-based research/ US centric
- American dataset – AARP (American Association of Retired Person) (WHO, 2007 – Global Age-friendly Cities: A Guide)

older people.

Discussion topics

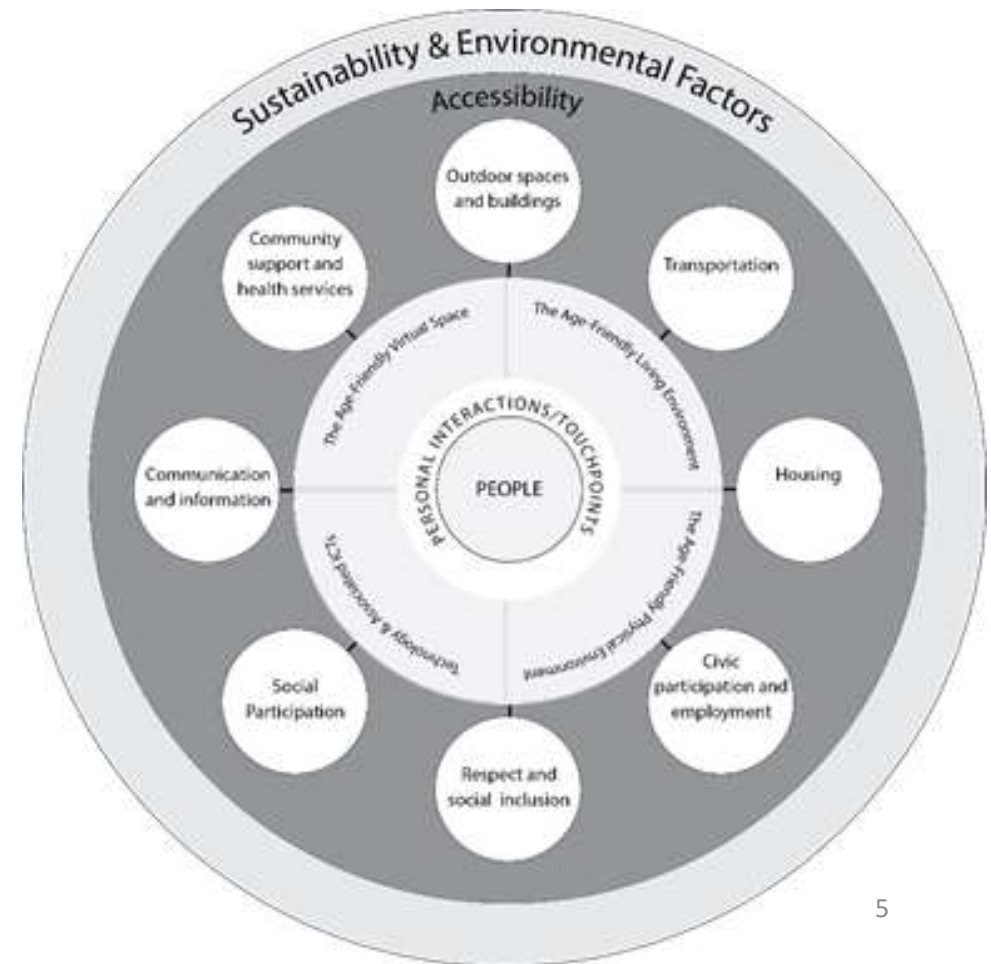
A total of eight topics were explored in the focus groups to give a comprehensive picture of the city's age-friendliness. The topics cover the features of the city's

structures, environment, services and policies that reflect the determinants of active ageing. The topics had been identified in previous research with older people on the characteristics of elderly-friendly communities (14,15). The same basic questions

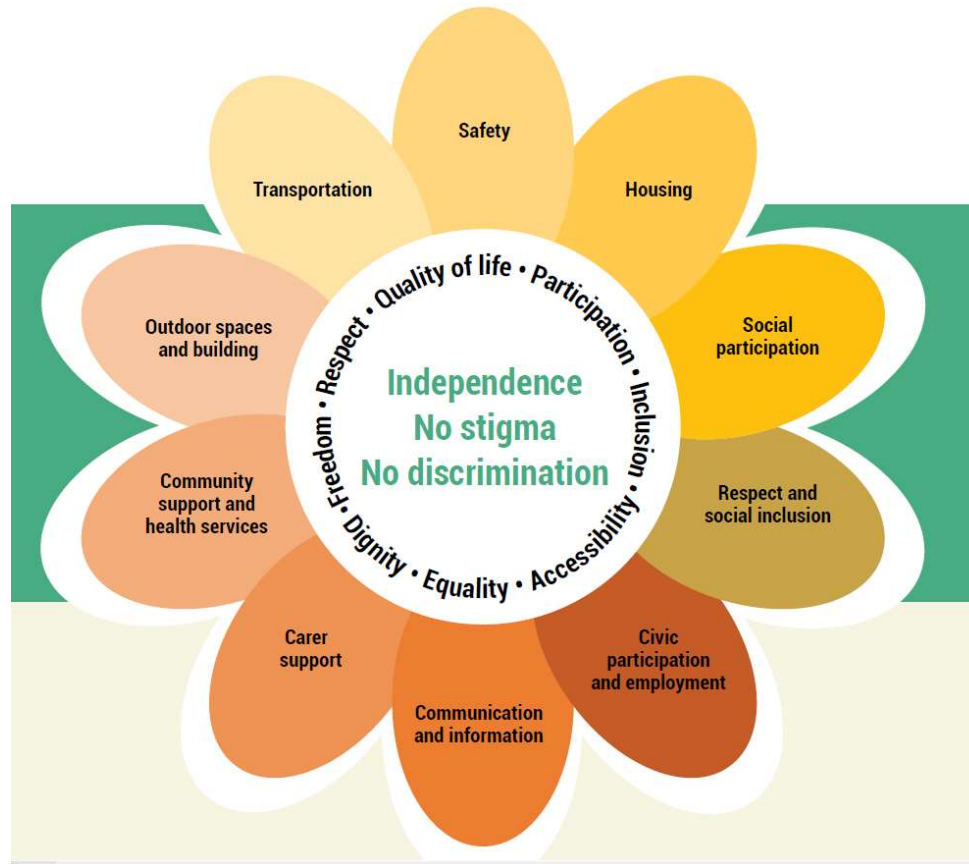
14. *Livable communities: an evaluation guide*. Washington, DC, AARP Public Policy Institute, 2005 (www.aarp.org/research/housing-mobility/incliving/d18311_communities.html, accessed 26 June 2007).
15. *The AdvantAge initiative. Improving communities for an aging society*. New York, Visiting Nurse Service of New York, 2004 (<http://www.vnsny.org/advantage>, accessed 26 June 2007).

Age-friendly Cities & Communities (AFCC)

- ‘Who Doesn’t Think about Technology when Designing Urban Environments for Older People?’ A Case Study Approach to a Proposed Extension of the WHO’S Age-friendly Cities Model (Marston & van Hoof, 2019)
- How does a (Smart) Age-friendly Ecosystem Look in a Post-Pandemic Society? (Marston, et al., 2020)



Dementia friendly Cities



World Health Organization Dementia AFCC Model (2021)

<https://www.who.int/publications/i/item/9789240031531>

Age-friendly Cities & Communities Questionnaire (AFCCQ)

De Age-Friendly Cities and Communities Questionnaire AFCCQ (Nederlands)

Vraag	Domain	Helemaal oneens	Oneens	Nogch met eens, noch met oneens	Eens	Helemaal eens
HUISVESTING						
1	Mijn woning is toegankelijk voor mij	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Mijn woning is toegankelijk voor mensen die mij willen bezoeken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOCIALE PARTICIPATIE						
3	In mijn buurt zijn voldoende gelegenheden om mensen te ontmoeten	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Activiteiten en evenementen worden georganiseerd op voor mij bereikbare plaatsen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	De informatie over activiteiten en evenementen vind ik voldoende en ook geschikt voor mij	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Ik vind het aanbod van evenementen en activiteiten voldoende afwisselend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOCIALE INCLUSIE						
7*	Ik krijg wel eens vervelende of negatieve opmerkingen vanwege mijn leeftijd	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8*	Ik krijg wel eens te maken met discriminatie vanwege mijn leeftijd	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BURGERPARTICIPATIE EN WERKGELEGENHEID						
9	Ik heb voldoende mogelijkheden om met jongere generaties om te gaan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Ik voel mij een gewaardeerd lid van de samenleving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COMMUNICATIE EN INFORMATIE						
11	Gedrukte en digitale informatie van de gemeente en andere maatschappelijke instanties zijn goed leesbaar qua lettertype en grootte	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Gedrukte en digitale informatie van de gemeente en andere maatschappelijke instanties zijn geschreven in begrijpelijke taal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOCIALE EN GEZONDHEIDSVORZIENINGEN						
13	Het aanbod van zorg en welzijn in mijn stad is voor mij voldoende	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Als ik ziek ben, krijg ik de zorg en hulp die ik nodig heb	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Indien nodig, kan ik zorg en welzijn telefonisch en fysiek gemakkelijk bereiken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	Ik heb voldoende informatie over zorg en welzijn in mijn buurt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	Zorg- en welzijn werkers in mijn buurt zijn voldoende respectvol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
BUITENRUIMTE EN GEBOUWEN						
18	Mijn buurt is voldoende toegankelijk voor rollator of rolstoel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	De winkels in mijn buurt zijn voldoende toegankelijk met rollator of rolstoel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
TRANSPORT						
20	Ik kan gemakkelijk instappen in de bus of tram in mijn buurt	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21	De bus- en tramhaltes in mijn buurt zijn gemakkelijk te bereiken en te gebruiken	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FINANCIËN						
22	Mijn inkomen is voldoende om zonder problemen in mijn basisbehoeften te voorzien	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	Ik kan goed rondkomen met mijn inkomen	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The Age-Friendly Cities and Communities Questionnaire AFCCQ (English)

INTERPRETATION AFCCQ TOTAL SCORE AND SEPARATE DOMAINS

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AFCCQ Total score	≤ -35.1	-23.1 – -35.0	-11.5 – -23.0	-11.4 – 0.0	0.1 – 11.4	11.5 – 23.0	23.1 – 35.0	≥ 35.1
Housing	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Social participation	≤ -6.1	-4.1 – -6.0	-2.1 – -4.0	-2.0 – 0.0	0.1 – 2.0	2.1 – 4.0	4.1 – 6.0	≥ 6.1
Respect and social inclusion	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Civic participation and employment	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Communication and information	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Community support and health services	≤ -7.6	-5.1 – -7.5	-2.6 – -5.0	-2.5 – 0.0	0.1 – 2.5	2.6 – 5.0	5.1 – 7.5	≥ 7.6
Outdoor spaces and buildings	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Transportation	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1
Financial situation	≤ -3.1	-2.1 – -3.0	-1.1 – -2.0	-1.0 – 0.0	0.1 – 1.0	1.1 – 2.0	2.1 – 3.0	≥ 3.1

Scoring system

All questions of the AFCCQ are answered on a 5-point scale, ranging from totally disagree to totally agree.

Scores: -2 = totally disagree; -1 = disagree; 0 = neutral; 1 = agree; 2 = totally agree.

Items marked with an asterisk (*) should be recoded in the opposite direction (-2=2, -1=1, 0=0, 1=-1, 2=-2)

Sum all scores of the AFCCQ for the total score.

Sum all scores of separate domains for the domain specific score.

Reference

Dikken, J., van den Hoven, R.F.M., van Staalduinen, W.H., Hulsebosch-Janssen, L.M.T., van Hoof, J. (2020) How older people experience the age-friendliness of their city: Development of the Age-Friendly Cities and Communities Questionnaire. *International Journal of Environmental Research and Public Health* 2020;17(18):6867 doi: 10.3390/ijerph17186867

Colophon

This questionnaire is made by J. Dikken (The Hague University of Applied Sciences), R.F.M. van den Hoven (The Hague University of Applied Sciences), W.H. van Staalduinen (AFedemy), L.M.T. Hulsebosch-Janssen (Hulsebosch Advies) and J. van Hoof (The Hague University of Applied Sciences) with support from the Municipality of The Hague (grant number OCW/2020.1121).

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The Hague



THE HAGUE
UNIVERSITY OF APPLIED SCIENCES



Evidence submitted to the UN Decade of Healthy Ageing as a case study.

Published evidence in: UN Decade of Healthy Ageing Progress Report 2023



- 1= Totally irrelevant
- 2= Irrelevant
- 3 = Largely relevant
- 4 = Relevant

Domain 1: Housing	1	2	3	4
1. My house is accessible to me				
2. My house is accessible to the people who come to visit me				
Domain 2: Social participation				
3. There are enough opportunities to meet people in my neighbourhood				
4. Activities and events are organised in places that are accessible to me				
5. The information about activities and events is enough for me and also suitable for me				
6. I find the range of events and activities sufficiently varied				
Domain 3: Respect and social inclusion				
7. I sometimes get annoying or negative remarks because of my age				
8. I sometimes face discrimination because of my age				
Domain 4: Civic participation and employment				
9. I have enough opportunities to interact with younger generations				
10. I feel like a valued member of society				
Domain 5: Communication and information				
11. Printed and digital information from the municipality and other social institutions is easy to read in terms of font and size				
12. Printed and digital information from the municipality and other social institutions is written in understandable language				

Domain 6: Community support and health services				
13. The supply of care and welfare in my city is enough for me				
14. When I am ill, I receive the care and help I need				
15. If necessary, I can easily reach care and welfare services by telephone and in person				
16. I have enough information about care and welfare services in my neighbourhood				
17. Care and welfare workers in my neighbourhood are sufficiently respectful				
Domain 7: Outdoor spaces and buildings				
18. My neighbourhood is sufficiently accessible for a wheeled walker or wheelchair				
19. The shops in my neighbourhood are sufficiently accessible with a wheeled walker or wheelchair				
Domain 8: Transportation				
20. I can easily get on the bus or tram in my neighbourhood				
21. The bus and tram <u>stops</u> in my neighbourhood are easy to reach and use				
Domain 9: Financial situation				
22. My income is sufficient to cover my basic needs without any problems				
23. I live well on my income				
Do you think there are any domains or questions regarding the age friendly city questionnaire (AFCCQ) which are missing? If so, please note below.				

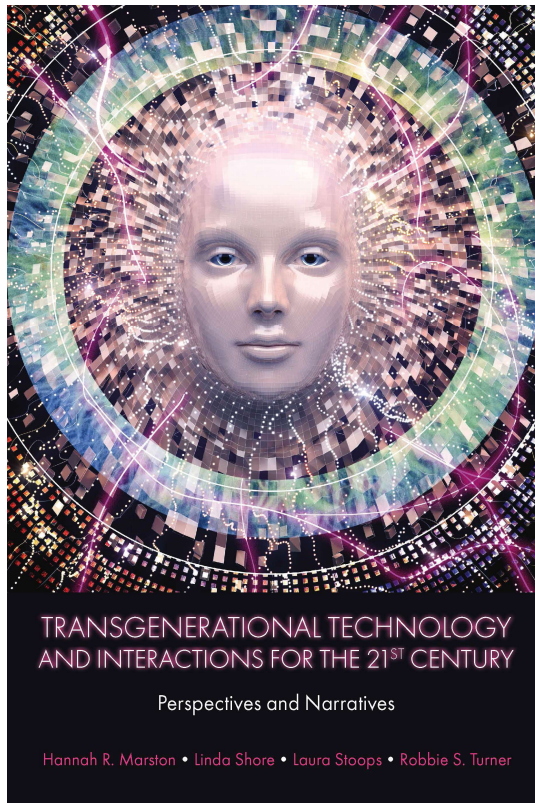
Age-friendly Cities & Communities Questionnaire (AFCCQ): Benefits

1. There is **NO** (current) AFCC quantitative measure
2. Applied academic research & build collaborations
3. Local authorities receive on the ground insights to the **needs, priorities** of **residents**
 - a) Planners/developers can use the data as a 1st indication of satisfaction to the physical environment
 - b) Organizations can use the data to set foundations for their actions and activities
 - c) Public transport providers for example
4. Contribute & add to the WHO Age-friendly Network (e.g., Middlesbrough, Milton Keynes)
5. Overtime, AFCCQ scoring can be compared to identify changes, improvements, transparency & accountability
6. Collects data directly from residents rather than spokes people
7. Complements qualitative data from communities, and research projects

AFCCQ Consortium

Outputs published	Sites underway
Dikken, et al. (2020)	UK/Ireland (Marston)
Turkey (Ozer, et al. 2022)	Australia (Barrie & Soebarto)
Romania (Ivan, et al. 2023)	Spain
North Macedonia (Pavlovski, et al. forthcoming)	Italy – Venice, Verona, Naples (Bertani)
Japan (Yamada, et al. 2023)	Portugal (Barata)
Russia - Tatarstan (Ziganshina)	Qatar
Israel – Tel Aviv, Kfar Saba, Netanya Jerusalem (Ayalon)	Latvia (Ozola)
Poland (Kazak)	People’s Republic of China – Shandong Province (Linxi)
	New Zealand

Transgenerational approach



- 1) We believe that chronological age should not determine vulnerability, for we are aware, vulnerability and age/longevity is not always mutually exclusive.
- 2) People should not be discriminated upon because of their beliefs, who they are, identify as, or what role they partake in society, and their voices should be expressed freely and listened to.
- 3) As a follow to Point 2, the expressive commentary voiced and expressed freely should not harm or hurt others by malicious criticism or attack.
- 4) Research and recruitment of participants who are perceived to be and/or are marginalized in society should not result in discrimination or biased research outputs.
- 5) We believe that a citizen continues to learn and gain life experiences and can offer contribution to society across their lifespan.
- 6) Innovation and research practices must consider democratised voices and user experiences as valuable catalysts to creativity and technology well-being for all.
- 7) Interdisciplinary research must be recognised across all disciplines as a vital contributor to societal growth and documented interactions
- 8) Inter & multi-disciplinary and unique language and terminology is recognised across disciplines through collaborative research providing a rich embrace and appreciation as we co-design, innovative research approaches and create new technologies, services and systems that benefit all.
- 9) We believe cognitive and physical limitations can be supported, and dignity is always offered and placed central to the person.
- 10) To reflect on digital legacies, emerging and future technologies should not harm or injure and should obey the instruction as directed by the human.
- 11) At all times the intervention of future technologies should not place any person in a position of feeling stigmatised or excluded by society.
- 12) The data that effectively is created and stored by actors (e.g., stakeholders) will be done collectively and offers the person (including guardian, next of kin) autonomy in voicing their agreement or dissatisfaction to this activity.

The Future

- Collaboration & contribution
- Contact details:
 - Hannah.Marston@open.ac.uk
 - [Work] <https://www.open.ac.uk/people/hrm93>
 - [Other] <https://hannahmarston.co.uk/>
 - LinkedIn: <https://www.linkedin.com/in/hannahmarston/>