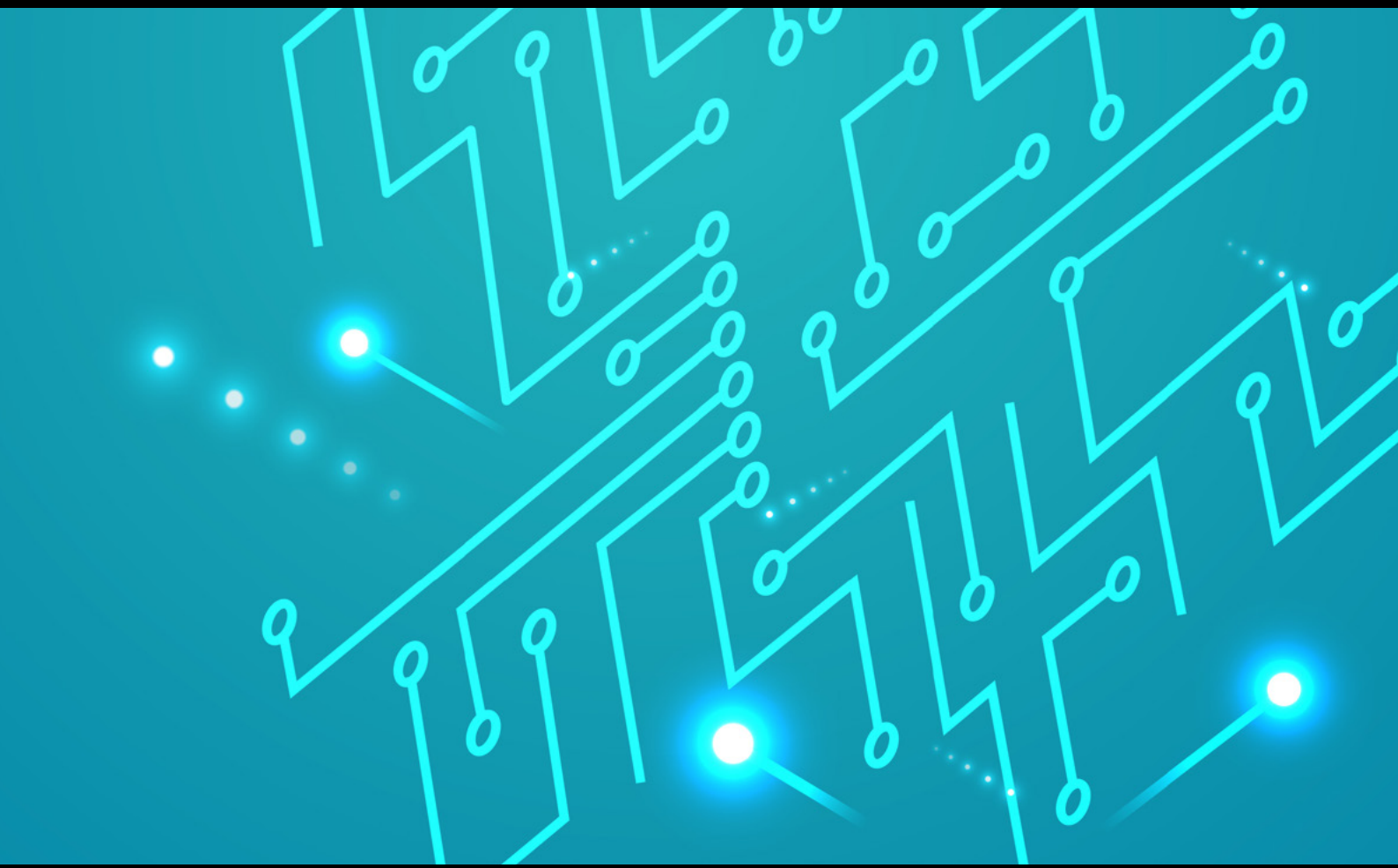
Ollscoil na Gaillimhe
University of Galway

An Institiúid Cúrsa Saoil & Sochaí
Institute for Lifecourse & Society

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

Digitally-Supported Engagement: Pathways for Individuals and Groups



Virtual-EngAge Translation Report Series No. 2

Funding

The research conducted in this publication was funded by the Irish Research Council under grant number COALESCE/2021/63.

Acknowledgements

The research team would like to express their thanks to the study's main collaborator Active Retirement Ireland (ARI), and particularly Maureen Kavanagh, Saskia Tigchelaar, and Alison Bough, who kindly supported and facilitated this work.

We would like to thank Dr. Bernard McDonald, Dr. Alison Herbert, Preetha Joseph and Jianmei Zhou for their contribution to the completion of the original research study, and all of the project collaborators and advisory board members for their very valuable support and guidance. We would like to express our thanks to all local Active Retirement Associations, who were contacted as a part of the research and did their utmost to assist the study.

We would like thank the members of the Virtual-EngAge Older Adult Reference Group, John Curtin, Marian Egan, Pat Guilfoyle, and Kathleen Fitzgerald who very kindly gave their time and provided valuable insights.

Finally, we would like to thank all the participants in this research, including the European-level policy stakeholders, ARI organisational representatives, older adult survey respondents and interviewees, and all of the participants of the Translation Forums who generously gave their time and input. This research was an active collaboration between the research team and all of these participants and could not have been completed without their contributions.

IRISH RESEARCH COUNCIL
An Chomhairle um Thaighde in Eirinn

ACTIVE RETIREMENT IRELAND

Introduction

Engagement in social, civic and political group activities in later life has been found to have positive impacts on well-being and connectedness for individuals, and wider benefits for the cohesion and vibrancy of societies (Serrat et al., 2020). These forms of collective participation have also been found to be often important for personal development throughout someone's life, and into older age (Woolrych et al., 2019). However, collective forms of engagement are changing and are becoming increasingly subject to digitalisation. This is in terms of how in-person collective engagement can be facilitated through the use of digital technologies, and the virtual ways in which engagement itself can take part (Fischl et al., 2020). There is also growing recognition and promotion of the potential benefits that digital technology may hold for collective engagement in later life. Nevertheless, our understanding of how digital technologies fit with older people's individual and collective routines of engagement is not well developed. Indeed, it is often suggested that the design and development of technology for older people, and related policy, overlooks older adult's everyday lives, and older people's own views and preferences regarding technology (Fischl et al., 2020; Peine and Neven, 2019). Furthermore, there are also concerns that digital technology agendas fail to recognise the variety of factors from people's earlier lives (e.g. education; income; values; exposure to technology) that may impact on the adoption and diffusion of digital devices. Nor do they recognise the range of skills that older individuals and collectives already possess with respect to technology use (Peine and Neven, 2019; Nowakowska-Grunt et al., 2021). Overall, this means we may be less able to convert the potential benefits of digital technology into real and practical positive impacts in older people's lives. It also means that without due consideration some older people may be left behind in this digital transition, and/or their capacities and agency may not be sufficiently supported and empowered.

With Active Retirement Ireland's (ARI) focus on supporting the participation of older people as full members of Irish society, ensuring that engagement remains accessible to its active retirement associations and its national membership in increasingly digitised societies is likely to be critical to its future effectiveness and sustainability.

This Translation Report aims to examine the current and future potential of digitally-supported pathways to enhance the engagement of ARI members, and to identify the actions that will promote and aid the development of these pathways in accordance with the everyday routines, technology-use and preferences of older people. The analysis presented in this report draws on findings from the Virtual-EngAge research study (https://icsg.ie/our-projects/virtual-engage-2/), and focuses on three core areas of engagement: social connectedness; information access and dissemination; and advocacy. This Report has five key objectives:

1. To assess the current access to, use of and satisfaction with digital technologies in supporting engagement across social connectivity, information provision and dissemination, and advocacy.
2. To explore the every-day factors, and the broader factors within society, that influence the capacity and desire of older people to utilise technology to support their engagement pathways in these three areas.
3. To investigate how older people's earlier life opportunities, challenges and experiences influence their capacity and desire to use technology to support their engagement pathways in the three areas.
4. To situate these factors within the broader public attitudes and European policy discourses related to older people, and ageing digitising societies.
5. To co-identify and agree actions to support the development of technology supported engagement pathways that are grounded in people's everyday lives, and that support the efficacy of older people with respect to digital participation.

It is intended that this analysis will help inform ARI strategies, and its network of local Active

Retirement Associations (ARAs), to support individuals and groups to enhance their engagement through everyday technologies. Specifically, actions that are based on the everyday lives of members, and that have relevance for older people with different levels of digital proficiency will be proposed for local-ARAs, the ARI national organisation, and for external State, voluntary and private actors to help overcome barriers in initiating, coordinating, and engaging in engagement activities.

ARI's Unique Context

There are two reasons why it is valuable to examine technology-supported engagement amongst ARI membership. First, ARI supports the engagement of a significant proportion of older people in Ireland (almost 5 percent: 21,500 members across 500 ARAs), and therefore provides an important means of reaching and impacting the lives of a sizeable section of the Irish older population. Second, because of the scale of this membership, ARI is likely to represent older people with a diverse range of digital skills and literacy, and a diverse set of experiences regarding access and use.

How the information for this analysis was collected?

Data for this analysis is drawn from four of the Virtual-EngAge work packages (WPs). These WPs are summarised below.

European stakeholder interviews on engagement barriers and enablers

Four interviews were conducted with European policy stakeholders to examine policy and innovation trends in relation to older adult grassroots organisations and collective engagement. Interviewees comprised of senior policy personnel or chief executives from within European-level civil society, strategic innovation and policy organisations. These included participants from ageing and carer advocacy organisations, a policy analysis unit within a relevant European Commission Directorate General, and a programme on product and service innovation for later life.

Survey and interviews on individual experiences of engagement and technology use

First, a self-completion questionnaire was distributed to ARA members, and comprised of question modules on: involvement with ARA; collective forms of information access and dissemination, advocacy, and social engagement; role of ARA and technology in supporting daily engagement; digital literacy, enablers and barriers; and preferences regarding ARI and technology supported engagement. The Secretaries of 150 ARAs were sent a survey pack by post, requesting that they would distribute the survey to six of their members (N=900). In total, 464 questionnaires were returned, providing a response rate of 52%. Respondents included 369 women and 83 men (missing information on gender was registered for 12 respondents). The sample ranged in age from 55-95 years (mean age: 75 years; standard deviation: 7.1 years), with 19 percent living in cities, 26 percent in towns, 53 percent living in a village or rural countryside, and 2 percent indicated 'other' location.

Second, in-depth follow-up interviews were conducted with a purposive sample of 40 survey respondents (from 153 respondents who consented to be contacted). The final sample comprised of 24 women and 16 men, ranging in age from 63 years to 88 years (mean age: 75 years; standard deviation: 6.1 years). Interviews explored in-depth those patterns observed within the survey results, but with a stronger emphasis placed on routines of collective engagement, and technology use, barriers and facilitators over the life course. The interview involved three parts. Open participant narration where participants relayed their own narrative of engagement and technology use in response to a single broad question. Second, a series of life paths were used as a visual aid to explore trajectories of engagement, exclusion and technology-use across people's lives. Third, a semi-

structured interview guide was used to probe further on the main survey topics. Four interviews were conducted online (via the Zoom telephony platform), 32 by telephone and four in-person.

Social media analysis of public attitudes

A social media analysis was completed to examine the inclusionary and exclusionary views and discourses related to ageing and older people, and older adult technology-use, evident within social media – as a major public sphere of a digitalising society. Concentrating on X (Twitter), the analysis focused on two datasets extracted from the platform to garner the views of the public on this topic. First, a general X (twitter.com) user dataset was constructed to capture the general feeling towards older adults. A list of terms derived from the academic and grey literatures was first compiled for 'older adults'. Tweets containing any of those terms were then collected for a fixed period of one month (April 2023) to ensure the exercise was feasible, and to achieve a representative sample. This dataset contained 5,739 tweets sent by 1,759 users identified as Irish residents. Second, a technology and older people dataset was extracted, based on predefined key words related to ageing, older people and grandparenthood and those related to digital technology devices. This dataset contained 2,035 tweets posted by 1,497 users resident in Ireland. These authors are generally younger, given the search string focus on grandparents. Both users and tweets were manually annotated into broad categories (e.g. users: individuals, non-profit organisations, public institutions; tweets: social exchanges; event promotion; information provision; political debate/opinion). A manual sentiment annotation was also performed to analyse the sentiment conveyed in tweets (e.g. positive, negative, neutral). While X (twitter.com) is considered not to be well utilised by ARA groups and older people, it remains the most commonly used digital engagement forum offering public accessible data for analysis.

How the recommendations and actions in this report were developed?

The recommendations and actions presented in this report are based on key messages and outline actions discussed and agreed at a multi-stakeholder Translation Forum. The Forum, which followed a deliberative-democracy workshop approach comprised of 13 members drawn from participants of previous study strands, and as such included representatives from ARI's professional secretariat and its National Board[1] (n=3), Regional Development Officers (n=5), and 5 individuals drawn from the older adult interviews. The Forum was the second in a series of three, with the subsequent two focused on presenting findings and deriving recommendations on ARI's communication and mobilisation practices for collective engagement (described in Translation Report 1), and the design of a digital application to support older people's engagement in later life (described in Translation Report 3). In the main, ARI and ARA members attended all three Forums (with the exception of three people).

The Forum lasted for 3.5 hours and comprised of three parts, with a summary of study findings presented on: (1) use of technology in everyday engagement and daily routines; (2) challenges that influence technology use in engagement; and (3) challenges as experienced by those with different levels of digital literacy. After each presentation small-group discussions (for 20 minutes) were held to identify if anything was missed in the research, and to identify key messages for each topic. In addition to thematic findings, compositive case-studies illustrating each of the themes were also used to stimulate discussion. A plenary session where all messages from the smaller groups were fed back was also held for each topic. Participatory Learning and Action (PLA) techniques were used within the forums to help ensure representation of voice amongst the various participant groups. Each small group discussion included ARI members from different levels of the organisation.

1. This included two individuals who had not taken part in the research, replacing previous participants who had since left the ARI organisation.

What was found?

The findings are presented in five parts. To contextualise the national study findings, we begin by describing the key barriers and enablers of digitally supported engagement from a European policy stakeholder perspective. The digital engagement profile of ARA members, with respect to the use of digital technology for engagement is then presented. This is followed by a summary of the results of a statistical analysis of whether using digital technologies, and other key socio-demographic variables, are associated with ease of engagement in the three spheres: social connection; information access and dissemination; and advocacy. Findings from older adult interviews on factors that influence the extent of the use of technology for engagement in daily life are presented thematically. Finally, findings concerning wider public attitudes and European policy discourses related to older people and ageing digitising societies are described.

European stakeholder perspectives on engagement barriers and enablers

European policy stakeholder interviewees were clear on the potential that digital technologies have for ageing societies, both with respect to older people's engagement, and a wider set of social benefits. This included greater service effectiveness and coordination, and greater levels of social connectivity, information access and voice. However, in the context of enhancing the engagement of older people within society, interviewees did note several challenges. First, stakeholder participants mentioned fundamental barriers that functioned to impede access across various levels:

> **Digital exclusion, it starts actually on the macro level already. If you don't have the infrastructure there, well you're out, you know?... The second one is then... is the openness of it. You know, can everybody have equal access to it? It's not just access, but equal access in there, and that, you know and that can be a cost factor, that can be... you have to have certain skills and things like that, so you have to deal with that. And then there's also... how much competition is in there to provide the best service for everyone in there? (Stakeholder-In-01)**

Second, interviewees noted how the current supply- and innovator-led market functioned to exclude the circumstances, needs and views of those who are to use the technology from the development process. This can be to the detriment of meaningful advancements in the area:

> **But the problem we see is it's essentially supply driven, okay? Rather than demand driven. So what we see is, we see a plethora of ICT based solutions targeted at carers. Rarely are actually informal carers involved in the development of these solutions, which means obviously they fall short, or give completely off target, so we can certainly improve that. (Stakeholder-In-03)**

Third, interviewees also highlighted the significance of challenges that manifest because of the pace of digitalisation. One participant noted how digitalisation simply compounded existing inequalities, and how an unsupported digital transition meant the exposure of vulnerabilities, and increased dependencies and risk:

> **...one of the risks that has been pointed out and this is something we see now and that our members are reporting back is that it [digitalisation] gives an additional channel for abuse in different dimensions. Simply because a number of older people who are not able to use new technologies rely on their family, on their carers... while in the past they were able to manage on their own...so some of our members wonders, as well, you know, about the risk of additional financial abuse or kind of pressure that can be put on older people... (Stakeholder-In-02)**

It is in the context of this pace of change that participants also raised older people's own perceptions of their ability to adapt to this increasingly digitised environment. As this participant describes, this was sometimes prevalent as a form of internalised ageism stripping individuals of their agency.

> **... to have internalisation of ageism by a number of older people which potentially prevent them using new technologies or putting an additional barrier you know it's because the society tends to say that it's not for older people, it's something that is done for young people, a number of them have decided that it's yeah they think it's not done for them and they are not capable of using those technologies so they tend to have these additional barriers and this is probably something that is very specific you know. (Stakeholder-In-02)**

Although several potential solutions, and local-based interventions were identified by stakeholders that may enable greater levels of engagement, two key areas of development were highlighted in particular. The first concerned the need and value of a more integrated, coordinated approach that embedded technology amidst a variety of other tools and needs:

> **You have to integrate things because a lot of this stuff, you know, since we're dealing with people, they have multi-needs and usually technology is often just a one need, a one thing. So, how do you build that into integrated platform? (Stakeholder-In-01)**

The second related to a culture shift and change in how technologies for ageing societies are developed. As this participant describes, this requires both a multi-stakeholder development process that accounts for the context of people's lives and for the diversity of older populations:

> **When it comes to creating a solution...it has to be co-created with its end user. So, if it's not created with the person for whom it is intended and also, maybe in the particular context it's needed, it would not work. So, the whole idea of putting all stakeholders together; of the citizen, the patient, the SME, the innovator, the carers and but also the policy makers is very important because at the end someone would have to support the adoption.... So, technology should enable, should be a helper to achieve wellbeing, better health, better mental wellbeing as well, better civil participation, it's an enabler. And then each person is different and has different needs, so that's why I say it should be person centred. (Stakeholder-In-04)**

Members' Digital Profile and Technology Use[2]

With reference to Table 1, high rates of internet access and training completion were evident amongst ARA members surveyed. This pattern of results suggests a group that is in overall terms engaged digitally. However, variations in the frequency of internet use, exposure to technology during working life and digital proficiency suggests a more diverse digital profile. During the period of the Covid-19 pandemic, it was also evident that while half of those who used digital technology increased their use, the other half did not either maintain their level of use, or reduce their use. Such variation is also reflected in members' use of and satisfaction with technology for engagement.

2. This text is an expanded version of a corresponding section presented in Virtual-EngAge Translation Report 1.

Table 1: *Digital profile of ARA member survey respondents*

Digital related characteristic	Number (N)	Percent (%)
Group size (total respondent sample)	464	100
Internet access		
Yes	373	87
No	54	13
Missing values	37	
Training course on how to use internet and digital technologies		
Yes	278	67
No	139	33
Missing values	47	
Internet use (frequency)		
Rarely	33	8
At least once a week	64	15
Every day	266	64
Non use	53	13
Use of digital technologies and internet at work		
Never/almost never	187	46
Occasionally	78	19
Frequently/Regularly	139	35
Missing values	60	
Digital proficiency*		
Low	107	32
Medium	58	18
High	163	50
Missing values	136	
Group size (only those who use digital technologies)	363	100
Changes in digital technology use during Covid 19		
Decreased	43	13
No change	126	37
Increased	172	50
Missing values	22	

Notes: *Digital proficiency is derived from the ability to browse the internet, the ability to check information sources on the internet, the use of communication tools, and sharing information, as measured by the Digital Capital scale (Ragnedda et al., 2020; 2018).

Seventy-five percent of survey respondents (n=247) used digital technology to support their social engagement, with 76 percent of this group (n=181) satisfied with this use. Digital proficiency had a significant effect ($p \leq 0.05$) on technology use for both men and women. Sixty-nine percent (n=141) of those using technology for social engagement reported high digital proficiency, while 16 percent (n=33) and 15 percent (n=30) reported intermediate and elementary levels of proficiency respectively. Qualitative findings provided further insight into the nature of this use. Some participants highlighted how technologies made distance less of a barrier, whereas others spoke about engaging in online classes and games, and valued a hybrid approach that combined virtual and in-person interactions.

> I keep in touch with people on Facetime. I keep in touch with people on Facebook. I can send messages. I have a sister in America. I can send messages to her on Messenger, which helps me to keep in touch with her. She also lives at times in India, so it's hard to make a phone call to India but I can use Messenger. (ARA-Member-In-133)

> So I think I'm kind of 50:50. I do some things online and some things [in person]... and then, you know, I'll just have a video chat with some people that live far away and that might be also visually impaired, so transportation is a problem, but then I have local friends that, you know we'd go out for a coffee, or go out for a pizza or something, and we meet in person for that. (ARA-Member-In-59)

But for most, technology use for collective social engagement concentrated on coordinating in-person social activities.

> ...modern technology is fantastic because you can say, okay, we want to go to [a place], like we did Killaloe. So you go in, what's interesting around Killaloe. So you can organise the day and just give the instructions to the driver, and so yes, people are more keen to socially engage but they're very selective about what they want to do. (ARA-Member-In-116)

Those who did not use technologies to participate socially, highlighted a range of reasons for this lack of use. This included members reporting being fearful of technology, or not being able to use digital technologies, or simply preferring face-to-face engagement.

> I am convinced that it's the fear of it, the fear of believing oneself not being able to use it and not knowing what to do with it. (ARA-Member-In-443)

> I find them [digital devices] intrusive to daily living in ways. They have their uses, but I think we have overused them. They've ruined the art of conversation. (ARA-Member-In-134)

According to survey respondents, information provided online was just one of the barriers to engaging in social activities (11%), with transportation (23%) the challenge reported most, followed by lack of relevance (19%), economic resources (16%) and time (12%).

Sixty-five percent of respondents (n=208) used digital technologies for information access and dissemination, with 80 percent of this group (n=166) satisfied in this use. Again, there was a significant relationship ($p \leq 0.05$) between an individual's level of digital proficiency and technology use in this sphere for both men and women. Seventy-five percent of those using technology for information access/dissemination (n=138) reported high digital proficiency; only 10 per cent (n=18) reported elementary levels, and 16 percent (n=29) indicated intermediate levels. Examples of information accessed and shared included local and national news, welfare and entitlements, and general contact information.

> Well, I suppose keeping online banking, for one thing. Definitely. The weather is another thing. Rural Ireland, funerals, death notices. Very important in rural Ireland. And, well, you'd see your headline there. Something happened in the country or in the news that you wouldn't be aware of otherwise if you didn't have the smartphone. (ARA-Member-In-105)

Nevertheless, information available only online was the most frequently reported challenge in this sphere (36%), followed by not knowing where to find required information online (20%). Older adult interviewees spoke about how the scale of information available online could be overwhelming and resulted, for some, in an aversion to accessing online information forums.

> **Now I know we're overfed information too you know in the line of what's happening around the world, it's not good, a lot of it … I tend to switch off. (ARA-Member-In-71)**

Just 19 percent of survey respondents reported using digital technologies for participating in advocacy, but once again a significant majority of this group (74%; n=32) expressed satisfaction with their experience. Digital proficiency had a significant relationship ($p \leq 0.05$) with the use of digital technologies, but in this instance this was only the case for women. Eighty-six percent of those with high digital proficiency levels are engaged in online advocacy compared to just 9 percent for those with elementary proficiency. Interview findings showed that technology was an increasingly integral part of mobilisation, particularly in relation to communicating with younger age groups:

> **But I do think the technology is a big help in this now because the younger generation know nothing else, only … That's the only way that they can be contacted is either by email or, you know, something like that. And they're sitting in their offices looking at computers and that's the only way.… So, I do think that technology is vital if you want to get involved in what's happening around us. (ARA-Member-In-28)**

Digitalisation was not reported by many respondents as a barrier to participating in advocacy, with under a tenth of respondents citing that activities only organised digitally (9%), and poor access to digital communications (4%) functioned as challenges. Challenges related to the lack of relevant activities (24%), lack of connection to advocacy networks (14%), lack of time and competing tasks (14%), and poor availability of information (14%) were all reported more frequently. Nevertheless, some older interviewees highlighted how analogue, rather than digital technologies offered greater privacy for advocacy.

> **I have at times written a couple of letters to the newspaper … It's interesting to see any reaction that there may have been. More recently, I would occasionally post maybe something that's a wee bit controversial onto Facebook, but that is a limited audience and I'm a little bit wary that things that I might put up there, for obvious reasons. (ARA-Member-In-07)**

Overall, digital technology use in engagement was largely driven by those with high-digital proficiency, masking digital divides operational in this population. Across the three areas, technology was also used less for collective engagement, and more in narrow, instrumental ways.

Ease of Engagement and Digital Technology Use

Overall, the results of a statistical analysis investigating the relationship between use of digital technology and ease of engagement in the three spheres indicate that there is some variation in this relationship across the spheres. The use of digital technology was found not to be significantly associated with ease of taking part in social activities. This indicates that those who use digital technology for this purpose and those who do not, do not experience any significant difference in the ease with which they participate in social activities. In contrast, the use of digital technology was found to be significantly associated ($p \leq 0.05$) with ease of information access, and ease of taking part in advocacy activities respectively. These relationships remained significant even after accounting for a range of other factors, suggesting that the use of digital technologies in these spheres contributes significantly to explaining the ease of engaging among spheres in this sample of respondents. Among the individuals who reported easy or very easy access to information, 66 percent indicated that they use digital technologies for information access, compared to 40% among those who reported

difficulties in information access. Individuals who reported ease in participating in advocacy activities reported using digital technologies for these purposes more often (28%, n=28) compared to those who reported to difficulty in participating in advocacy activities (11%, n=16).These results indicate that the ease of access to information and ease of participating in advocacy activities varies depending on the use of digital technologies for these activities.

A number of other factors were also found to be related to ease of engagement across the three spheres. Health status was found to be significantly associated with ease of engagement in each sphere. Individuals who reported ease in taking part socially, in accessing information, and in participating in advocacy activities were more often in better health (social activities: 82%; information access: 82%; advocacy: 84%), compared to those who indicated difficulties in these spheres (social activities: 51%; information access: 63%; advocacy: 72%).. Similar patterns were evident in terms of social support. On average, individuals who reported ease in taking part socially, in accessing information, and in participating in advocacy activities had higher levels of engagement with social networks, in comparison to those who reported difficulties in these spheres. While health and social network support remain significant for ease of social participation and information access, after accounting for other explanatory factors, only social network support remained significant for ease of participating in advocacy activities.

Determinants of Digital Engagement

Five core factors were identified as influencing the perceptions and use of everyday digital technologies for multifaceted collective engagement. These factors emerged from the lived experience and life-course narratives of individuals and can be broadly understood as mediating participants' relationship with everyday technologies and collective forms of engagement across the three target spheres.

Lifelong development and technological engagement and Human Development

Life-course experiences significantly influenced exposure to, and attitudes and capacities towards technological engagement, with timing and opportunities emerging as critical factors. First, differential trajectories regarding education, work and family life were described as presenting different sets of opportunities for engagement, and for different levels of contact with technology. These experiences encompassed direct exposure to specific technology (e.g. clerical technologies; trade-based electronic equipment), and participants' development of a confidence and capacity to learn new skills. Diverse occupational backgrounds fostered varying degrees of technology engagement. Some female participants spoke about their vocational working lives (teaching; nursing) and of how their chosen careers had led them to use technology. It was, though, mostly male participants with professional training who highlighted the influence of work-related technology use, with one person noting:

> **Well, you see, for a few years before I retired, I would have used a computer at work, but that was just a special programme like, you know, and yeah... that's when I would have got the first feel of technology. ... So I sort of graduated from there. (ARA-Member-In-113)**

However, given the gendered norms prevalent for older generations, older women often noted that their roles as homemakers and caregivers limited opportunities not only for technology engagement, but for engagement more generally. One woman stressed the importance of family and the sort of trade-offs that were made:

> **You have to realise your priority when you have a family, is your family, and you couldn't let any of your activities interfere with the business of a growing family." (ARA-Member-In-130)**

It was clear from some participant's narratives that trajectories of work, family and technology intersected and had to be balanced at various points across an individual's life course. This older

woman describes how her education and employment as an administrator inspired a lifelong interest in and aptitude for exploring new technologies, despite leaving education and work at various points to rear her family:

> **... in the technological college ... we got the first electric typewriter in, and I was the first to actually type on it and I loved it. ... as each new technology came in, I absolutely loved it. And even though I was married then with four children, when I had my fourth child, computers were all coming in... so I decided then to go back to college to learn all about computer courses. ... So, I went back to work then again in an office whenever I had those new qualifications... So, I never really had a problem, right up to date, like I'm still quite good. (ARA-Member-In-43)**

Second, and in a similar way, life-long personal interests often provided the necessary motivation to both engage in general and to embrace digital technologies for some participants. One man's narrative draws a significant connection between his lifelong interest in music and his engagement with technology, where his journey from shyness to sociability was intertwined with his musical pursuits, his professional training in electronics, and his efforts to combine both to expand his social networks:

> **I was extremely shy as a young lad but music took me out ... So now, social gatherings wouldn't be difficult at all for me ... I just love [music] electronics and that interest in that alone would have brought me into lots of discussions, groups ... (ARA-Member-In-443)**

Third, even where these trajectories were not described as directly influencing the end level of technology-supported engagement use in later life, they did impact the timing of such engagement. This was most pronounced with respect to specific life events, or transitions to new life states and stages. For example, one participant spoke about how her engagement was halted because of having to provide end of life care to her husband, and her subsequent experience of bereavement:

> **I'm socially active enough now. I wasn't socially active for a few years there because my husband wasn't well and he became blind before he died and that was it. So, I'm a bit freer now than what I was... (ARA-Member-In-26)**

Other transitions were more normative and stage/age based, where participants spoke about retirement as a significant transition that provided the additional time and incentive to engage socially and seek access to information. But even in these instances of major life transitions, it was clear that past experiences had a bearing on how equipped participants were to adjust to these transitions. For example, a retired teacher described how her exposure to technology in her career laid a solid foundation for her continued use of technology in engagement. In this manner engagement emerged as a dynamic component of personal development for several participants, representing a continuation of a life ethos of staying "active". For some of these individuals, technology was seen as a step in their ongoing journey of personal growth.

Geographies of Engagement

The local environment played a key role in shaping older adults' collective engagement and technology-mediated participation. Participants' geographic locations, infrastructure, and the changes therein significantly influenced their engagement capacity. In rural areas, depopulation, limited amenities, and altered socialisation patterns resulted in few opportunities for certain forms of social and civic participation. One woman living in the countryside observed:

> **We had a great community... I live in the country like, you know out in the middle of the country and in the town where I lived, we were all in and out to one another and neighbours, helped one another. But that's all gone. The whole thing has changed. (ARA-Member-In-103)**

Participants noted a shortfall in essential amenities, which limited access to services but also restricted the opportunity to interact with the social fabric and vibrancy of a locality, and wider society. One woman highlighted her isolation due to her distance to services, the slight improvements with new families moving in, and the need and potential for technology investments in less urbanised areas:

> I shouldn't say totally isolated but it's still quiet, you know. We're a mile from a shop. We're 50 miles from the hospital. We've no public transport. We've no public lighting. … But there are a few houses beside me now where young people and young families have settled, … which is great … I'd use to think, God, when I get older here there will be nobody around me. (ARA-Member-In-105)

Similar challenges were apparent for those living in 'in-between' peripheral locations, where the potential for investment in local engagement and infrastructure was unlikely, given the proximity to larger urban centres. This participant living on the urban fringe of a large town describes this constraint on development:

> … there's the local GAA … but that's all that I know of now… you'd have to go to [large town] for other things. … It's only 10/15 minutes in the car to [large town] and you have trains and everything in there, but we'll say, there would be more local activities [here] if it was further away from [large town]… (ARA-Member-In-83)

A lack of community cohesion was a distinct challenge in such peripheral places, and was described as limiting the capacity of local areas to support, drive and house multifaceted forms of engagement – affecting both in-person and virtual participation. As this participant describes, challenges regarding building a community for engagement can reflect changes in the local population and the frequency of contact:

> I see what happens in our area now, we're on the fringe of the city … the thing about it is that people move in here, we meet them and we welcome [them]… We never again see them. We could be dead and buried … They are the people that aren't living properly in the community. (ARA-Member-In-26)

The COVID-19 pandemic had a profound impact on the geography of engagement. It not only confined individuals to their immediate surroundings but also reshaped their social habits. The enforced isolation led to a longer-term re-evaluation of social and technological engagement for many participants in local areas, driving both the challenges and opportunities for technology-mediated participation. In the context of these challenges, a large number of participants highlighted the essential nature of digital technologies for engagement. However, many of these participants also highlighted the lack of technology infrastructure. Issues such as power outages, poor mobile phone coverage, and limited broadband access were commonly mentioned. One woman, for example, expressed frustration with unreliable internet:

> … I'd be doing something on the computer or looking up something and it would disappear … The broadband was so bad. You know? You'd be working on something and you'd have to give it up and go back to it again. … There's no point in having the equipment if you haven't the access to the background technology…(ARA-Member-In-28)

The lack of accessible training in local areas was also noted as a significant hindrance. This gap led some individuals to suggest that they could have been more confident in using technology if they had received more training. As one woman living in a village expressed:

> I might just possibly do a course on something more, on emails and I would like to be better informed, more knowledgeable about doing the Zoom. It's not that more knowledgeable, but more confident. I'm just afraid if I decided to do a Zoom call, I would press the wrong button. (ARA-Member-In-128)

Amidst these challenges, people highlighted how a local culture of engagement was important in addressing gaps in training and infrastructure. Some individuals spoke about grassroots community initiatives aimed at organising training sessions in technical skills. Other participants spoke about actively campaigning for the rollout of technology infrastructure in their communities, demonstrating initiatives taken by some to advocate for the needs of other older people in their communities.

Digital Technology and Social Relationships

Participants' accounts indicated the dynamic interplay between social relationships and digital technology, which significantly impacted engagement patterns. First, many participants emphasised the importance of social support from family, friends, and community groups as being crucial in enabling their use of technology, facilitating access (gifting devices) and providing emotional and practical assistance (e.g. troubleshooting; maintenance). Family members nurtured and supported a technological curiosity and digital agency with respect to information access and different technological functions. As this older woman describes, this was key in making technology approachable:

> **… I must say, my family have been very instrumental in encouraging me to find out, and show me, how to do things on the phone, that I wouldn't have known myself. (ARA-Member-In-14)**

Another woman described her emotional experience of learning to use a phone, with her son guiding her through the process. The initial anxiety and uncertainty she felt when using a phone evolved into a sense of accomplishment:

> **He taught me, yes, how to use it and how to get the message on it and everything … So my first time that it rang … I said, 'My God, how will I answer this', but I got through it. (ARA-Member-In-442)**

However, some participants expressed reluctance to burden younger family members for help, partly because of the demands on their time, and partly because of how the generational gap in familiarity with technology might create a strain in exchanges. One man, for instance, shared:

> **Okay, well I have granddaughters living over the road but they are in college and in school… all young people are so with it, and you would ask when there is a problem with my phone. And they will call over … I'm not saying there's anything wrong with them, they are great. But they can't understand how say my age group doesn't understand a lot of the modern technology we have now, you know. And they wouldn't have the patience to help me you know. You hate bothering them too much, you know. (ARA-Member-In-103)**

It was in this light, that the notable benefit of peer support was particularly highlighted, where individuals drew especially on their existing social and activity networks which sometimes offered a more relatable and patient source of support. One man noted the difference in receiving help from peers versus younger family members:

> **Like I find that, with younger people, my granddaughter, for example, that if you say to her, 'How did you tell me to do that again? I can't remember'. 'Ah Granddad' and it's a big deal to them, whereas if I'm with Danny out of the club… he'll run through it again with you, easy, in our language, if you know what I mean, and you'd pick it up quicker. (ARA-Member-In-40)**

Nevertheless, reliance on specific relationships for technological support could become problematic. In some cases, the dependency on others for technology access was most exposed when support is lost due to bereavement. For example, one man spoke about his desire and need to learn more about using his laptop after no longer being able to rely on his recently deceased wife:

> I'd love to know more about how to handle my laptop … I'd love to be able, because my wife used to do all that for me, I'd say, 'Can you do this for me?', and she'd have it done in seconds and I never bothered listening to her or watching her or learning it because I was always doing something else probably, I suppose. (ARA-Member-In-100)

In other instances the dependence on certain relationships for support could lead to tensions and relational challenges for the older person. A number of participants spoke about how their family member could become frustrated with the pace at which they learned. One participant shared a distressing experience with her son, and the sort of ways such exchanges re-enforced negative perceptions around self-efficacy and technology use:

> But you know, what I've noticed with my own children, I would ring them if I had anything that I wanted advice, right, and they'll talk to me and my son speaks very quickly and he said to me one day, this is quite poignant, 'Do you know, I always thought I had an intelligent mother until now'. I said, 'What do you mean, until now'. Well, he said, 'You're a bit slow at grasping this.' (ARA-Member-In-116)

The absence of support, as for some participants, not only amplifies digital exclusion but also compounds isolation, especially as activities and engagements increasingly move online. One woman pointed out this dilemma:

> So, if you don't have the facility to use technology … what happens to people for whatever reason can't ask somebody else … how do they manage … everything now is make a phone call, go online. (ARA-Member-In-121)

Structural Aspects and Ageism

Interviewee narratives revealed the multidimensional nature of digital exclusion faced by many participants, linked to challenges posed by the rapid social and technological change. This exclusion pervaded many technology dimensions, from inaccessible jargon to an unfamiliarity with technologies, and intensified apprehension towards virtual engagement. Expressing the multi-layered nature of this exclusion, one man describes how digitalisation of societal structures can effectively bar individuals from participating in key areas of life:

> Excluded. You're excluded from the general run of things because you are computer ignorant. You can't do online business, you can't do this, you can't … I can't even send a text. (ARA-Member-In-130)

Social discrimination emerged as a systemic issue as a result of the magnitude of the digitalisation of services related to different forms of engagement, such as online ticketing. Some interviewees noted in particular the rise and predominance of the online world during the pandemic as compounding exclusion. As one man put it:

> … during Covid, things shut down. … it opened up a huge gap, the Zooms and the not Zooms. … all of a sudden, there you are, you're not part of a big world. (ARA-Member-In-56)

This in effect side-lined older individuals from core participation spheres. One older man, who felt excluded from attending sports events he had been involved in throughout his life, outlined his sense of disenfranchisement due to technological barriers:

> … when a decision like that can be made, to make tickets only available … over the internet, they're forgetting about that population that nurtured youngsters and brought youngsters out to play the game … and how they helped the game to develop, and here we are now, after all their years, in their older years, a lot of them not able to get a ticket for a match because they can't use a computer. (ARA-Member-In-134)

But such discrimination in the minds of some participants was also a reflection of entrenched deficits within research and development, where these processes were suggested to overlook the needs of older users, suggesting a systemic innovation neglect. As this older woman describes, technology development tends to prioritise consideration of younger users, often neglecting the unique needs and preferences of older individuals:

> **... I think they're (digital devices) all really developed for whizz kids ... I don't think there's enough emphasis in trying to encourage older people to start from the beginning and gradually get into it. (ARA-Member-In-29)**

The financial implications of technology use, such as the costs of devices, maintenance, and constant needs for updates, posed additional structural constraints. They were noted to be especially a burden by those on fixed incomes, as this older woman states:

> **You know, the price of the phone of course is the big problem. Yeah. I mean, they're a bit off-putting really in the sense that on a weekly pension, not many people could afford an iPhone... (ARA-Member-In-04)**

Participants also highlighted the lack of opportunities for appropriate digital training. Functioning as a form of structural ageism, where a lag in the development of adequate supports for older generations contributes to a sustained knowledge deficit and a failure to account for this generation's digital needs. An older man pointed to the infrequency of technology training, emphasising its value but noting its scarcity:

> **It [the training course] only comes up ... maybe once every 12 months... Tis a very interesting thing alright, yeah. I think it's the best of the whole lot for the elderly people, you know, because I mean, we're living in the wrong generation but you know. I would have liked it if I was back earlier... (ARA-Member-In-25)**

Despite these challenges, a narrative of individual responsibility was evident among participants, and appeared to influence the attitudes and expectations of interviewees. Amongst some participants, typically those most engaged, there was a perception that other older individuals should take more initiative and make more efforts to embrace digital engagement:

> **And a number of [older women] have smartphones, but all they do is answer the phone or make a call with them... if they allow themselves the time ... to learning maybe two or three things, and then lose the nervousness about it, that they could then enjoy other things. (ARA-Member-In-14)**

This emphasis on individual responsibility sometimes led to self-blame and a perception among some that they, and other older adults like them, were the problem. Revealing an internalised form of ageism, a number of participants interpreted their struggles as a reflection of their own failings, as this older woman illustrates:

> **I think, if I put my mind onto it, I could do it but as I said before, I've always had people to help me out and they get mad at me and annoyed at me ... But I still don't learn from that, so I think that's my own fault. (ARA-Member-In-75)**

Attitudes Towards Virtual Engagement: Acceptance and Resistance

Across participant accounts, attitudes towards virtual engagement emerged as a central theme in how people engaged with digital technologies in their lives. Attitudes were located on a continuum of acceptance and resistance, revealing a spectrum of behaviours and mindsets across the participants, as well as within participants' own narratives. At one end, some participants embraced technology for its ability to support daily routines. This acceptance was largely informed by their ability and access in relation to technological devices and platforms. One woman captured the essence of reliance on technology:

> **Well, I hope it [technology] continues to [support her future activities] because I'd be lost without it, to be quite honest. Yeah, if anything changes, I hope to change with it, but hopefully it will be a change for the better. I want to learn more. (ARA-Member-In-04)**

Acceptance was also often pragmatic; technology was valued for its role in facilitating communication rather than as an end in itself. For example, one older woman viewed technology as a means to enhance social participation, rather than a platform for engagement itself. Conversely, others spoke about resisting digital engagement, fearing it might erode social interactions and intrude into their daily activities. This man, for instance, regretted the loss of face-to-face interaction, which he viewed as essential for meaningful communication:

> **... my whole theory of life is communication with each other, one on one ... With [technology], that's gone. It's impersonal, but not only that, this machine is using what you should be using ... with your mind ... I see that as an interference with the dignity of the human being. (ARA-Member-In-130)**

Such resistance sometimes stemmed from concerns over technology supplanting traditional interactions, reflecting broader social shifts and a perceived loss of interpersonal values. Underpinning these attitudes were deeper concerns. For some, resistance often appeared to stem from a fear of a sort of substitution effect, where there was an apprehension that technology might supplant traditional modes of in person interaction. As one woman stated:

> **There's plenty of other ways of communicating apart from technology ... people don't have to depend on technology all the time. (ARA-Member-In-04)**

For most participants, a grey area emerged, where recognition of both benefits and disadvantages coexisted. This grey area arose where even those who accepted or embraced technology use occasionally voiced the need for limitations of its use. This older man's experience highlights the dichotomy between reliance on and criticism of technology – he refers to his dependency on the phone, yet he simultaneously criticises this dependency, particularly noting its impact on social skills:

> **...I don't know what I would do without my phone even though I was criticising them and all, I'm probably – I'm criticising people and I do it myself. I could be sitting here watching something on the television and the first thing I do when the ads come on, is to pick up the phone to see what's going on... They're great but I think it ruins people's social skills, to be honest with you. (ARA-Member-In-40)**

Some participants transitioned from resistance to acceptance, driven by the recognition of the necessity of technology to stay connected, and the benefits it offered for self-efficacy. A woman's experience with adapting to social media illustrates this shift in mind set:

> **... when you're using WhatsApp, you're visualising those people that you're communicating with ... I was so used to the old phone calls over the years. No, the WhatsApp, they're there, but the old phone call, they're actually beside you I do think. ... But it's just a question of me changing my mind to adapt to that way of thinking for the WhatsApp. (ARA-Member-In-105)**

The COVID-19 pandemic emerged as a central factor informing participants' attitudes towards digital technology. People appeared to move from ambivalence or resistance to recognising its role in maintaining connections during times of isolation. The transition reflects a broader social shift, illustrated by this participant:

> **... in one way, we've kind of made [technology] necessary. I suppose Covid kind of forced it on us a bit more ... Now, we probably see it as fairly essential and necessary, and everybody, the majority of people, the fact that they are using it to some degree, it makes it probably necessary ... If we stopped it, it probably would create a bit of trouble. To that extent, it is essential. (ARA-Member-In-35)**

While the pandemic necessitated a rapid adaptation to digital platforms for many, it also caused a re-evaluation of what constitutes necessary communication tools. The forced digital adoption brought to light the dual nature of technology – both as a lifeline in times of social distancing and a potential detractor from traditional interactions. The experience highlighted the balance, revealed in participants' attitudes, between leveraging digital tools for connectivity and preserving the essence of collective interactions.

Social media discourse on ageing and technology

Within the general X (twitter.com) dataset, based on manual annotation of a 250 item subset of the 5,739 items that met retention criteria, most of the tweets (78%) appear to be initially neutral in form, with little polarity in sentiment directly expressed. However, these tweets ultimately convey that older people are a group who should be taken care of due to a vulnerability, displaying a more paternalistic tone within the tweet's content. In these cases, older people, along with other groups (such as children) are framed as more passive than active participants in society. Among the 22 percent of tweets that expressed a clear polarity, 3 percent were positive and 19 percent were negative. Negative tweets typically reflected a disagreement with another user, where the author is making a joke at the expense of the person, and/or using derogatory age-associated terminology (e.g. 'boomer') to insult the individual.

The 'Technology and Grandparents' dataset provides evidence of the attitudes in the general population with respect to older adults and technology. Of those tweets deemed relevant to this topic, 50 percent are tweets that were categorised as neutral and contain simple descriptions, such as "my grandfather bought an iPad". The remainder, however, incorporated negative and positive tweets with the former comprising 27 percent of the tweets and the latter comprising of 21 percent. Tables 2 and 3 presents a sample of negative and positive tweets.

Table 2: *Examples of positive tweets on older people and technology**

'My dad trying to teach my grandma how to use an iPad... cutest thing ever'
'My granny got an iPad! She can FaceTime me now.'
'Grandpa bought me a tablet for my birthday :)'
'Goal for today: teach my grandma how to use an #ipad because she wants to learn.'
'My granny bought an iPad2 because her iPhone is "so last year". I love my granny.'

Notes: Examples are modified to protect users' identity.

The content of positive tweets can be categorised into three primary kinds of content, including:

1. A grandparent gave the author a device and they are happy about it;
2. A grandparent acquired/owns a device and the author is proud/happy for them, occasionally enjoying communicating with them using the device;
3. The author or somebody else is helping a grandparent (e.g. teaching them; fixing the device) and the author is happy about this.

Table 3: *Examples of negative tweets about older adults and technology **

'Few things can frustrate me as much as teaching my grandma to use an iPhone'
'There's a boomer taking pictures with an iPad'
'My granny has an iPad, I'm gutted'
'Twitter for iPad??? What are you? A 50 yo boomer?'
'I got a new iPhone and I feel like a grandpa'

Notes: Examples are modified to protect users' identity.

The content of negative tweets can be similarly categorised into different kinds of content, including:

1. Author making fun of a grandparent's difficulties with technology or technology related to terminology. Some quotes appear to belittle older adults for talking loudly on the phone, or because they had set the volume on their phone to a high setting;
2. Author making fun or being frustrated while teaching a grandparent how to use a device;
3. Author expressing jealousy or appearing to question why a grandparent owns/acquired a device, as if they do not deserve it or are thought not to be able to use the device. These tweets appear to point to how technology is incompatible with older adults, while at the same time denoting surprise at the fact that older adults are interested in technology.
4. Authors drawing on stereotypical age-related associations to describe their own difficulties in using technology, e.g. "It took me so long to find how to do [technology related activity], I feel like a boomer!".

In sum, the results of the analysis suggest that while ageing and older people are viewed broadly positively within X (twitter.com), different ageist stereotypes exist on the platform, including those focused on vulnerability, derogatory characteristics associations. Attitudes towards older people, technology and engagement sit within this broader discursive context, and display similar patterns. Age-assumptions, homogenisation and ageist beliefs are evident and manifest in a number of different ways. This includes in terms of the inability to use technology, and being underserving of technologies.

Conclusions and Recommendations

The aim of this brief was to examine the current and future potential of digital technology to support the engagement of ARI members, and identify how to enhance technology-supported engagement into the future. The research indicates that older adult ARI members are using digital technologies for engagement to a reasonably strong extent, with an already high-rate of adoption evident. In overall terms, this finding is reflective of patterns observed for general digital technology use amongst the Irish older population (Kenny et al, 2020), showing a particularly strong rate of use within the social connection, and information access and dissemination spheres. This, though, is not the case within advocacy activities. The high rates of satisfaction amongst those using these technologies across all three spheres also indicates that people were happy with how technology assisted them to take part, and were happy to use these technologies for such purposes. In overall terms, then, these findings challenge assumed notions that older people struggle with digital engagement (Peine & Neven, 2019), and highlight the potential that may be capitalised on for the future. However, examining these findings in further depth reveals a more complicated relationship between digital technology and engagement, and one that varies across digital proficiency, engagement domains, and individual preferences and socio-demographic circumstances.

First, usage patterns are largely driven by those with high-digital proficiency, masking the digital divides operational within this population. With almost a fifth of people never or rarely using the internet, and with significant proportions of those with lower levels of digital proficiency not using technology for engagement at all, there remains sizeable gaps between those who use and those who do not use technology. It is unsurprising that internet access, having completed a training course, and use of digital technology during working life was also significantly related to usage patterns, reflecting documented associations within the research literature (McCosker et al., 2021; Pena et al., 2021; Gales et al., 2020; Astell et al., 2019). Second, the findings also indicate that consideration must be given to the depth of technology use in supporting engagement. Across the three areas, generally technology was used less for collective forms of engagement, and often in less involved ways. Between the dominance of technology use for organising and coordinating activities in the social sphere, and for searching and retrieving in the information sphere, it was clear that the application of technologies for engagement was often more task-orientated, and instrumental. It seems likely then

that reported satisfaction rates were based on a narrow use of technology in relation to engagement. More meaningful digital engagement and virtual participation was evident in relation to advocacy. This suggested that opportunities for advanced virtual forms of advocacy engagement were not only available but were necessary in order to generate impact in advocacy spheres. This, together with the privacy and relevance concerns of some participants, is likely to explain the concentration of those with high-digital proficiency amongst those who did use technology for advocacy, and the low-levels of technology use overall in this sphere.

These more complex links between technology and engagement are also reinforced by the statistical analysis of technology use and ease of engagement. It would seem likely that use of digital technologies had a significant effect on information access and dissemination because of the instrumental nature of this form of engagement, and because being able to use technology effectively overcomes the most commonly cited barrier in this sphere (e.g. information only available on-line). The significant impact of technology use on ease of engaging in advocacy is likely to be a combination of the high-digital proficiency profile of those taking part in this sphere, and what appears to be the greater prevalence of virtual forms of advocacy. In contrast, technology use in the social domain is of insufficient depth to leverage greater social rewards, and insufficient to overcome the myriad of other barriers that are considered to be problematic, or more problematic than technology-related factors. The fact that factors such as health and social support mattered for all areas of engagement demonstrates once again their importance as key enabling factors. Ultimately, the findings highlight that the transition to digital engagement for older people across these spheres is still developing. It is also a transition that is advancing at very different rates, with almost a third of ARA members reporting a low digital proficiency, and half reporting intermediate or low levels of digital proficiency.

The five challenges identified in this research help to situate these patterns within the lived experiences of older people and highlight some of the key determinants of technology use for engagement amongst ARI members. These challenges have been previously found to have an influence on the adoption and use of digital technologies in later life – albeit that this evidence primarily refers to the individual use of technology, rather than collective forms of engagement (Gales et al., 2020; Astell et al., 2019; Chesley and Johnson, 2014). While some of the challenges are very clearly rooted in the everyday lives of older people, others represent or are intertwined with earlier and accumulated life experiences. This includes life-long technology engagement, but also relational, structural and attitudinal factors. The importance of the challenges was also found to be robust across the accounts of participants who reported low-, medium- and high-digital proficiency. That said, the negative impact of life-course factors (e.g. less exposure to technology in work/education), social relations (e.g. lack of supportive individuals) and attitudes (e.g. high degree of reluctance) was generally most pronounced for those who reported lower digital proficiency. In these cases, people were less likely to be able to draw on formal training and previous experience with technology, or less likely to be able to draw on supportive relationships to support the use of digital technologies in later life. Attitudinal factors were less linear, with some participants' reluctance reinforced by their low-digital proficiency, while the reluctance of others was based on choice and less likely to be concerned with digital literacy.

It was evident from the research findings that the challenges were not fixed in their impact on individual's lives over time. In some cases, people showed considerable capacity to overcome these challenges by harnessing opportunities that became available for engagement and/or digital training, engaging with technologies when other constraints and demands had dissipated, or by leveraging support from family, friends or even through local ARAs. In other cases, challenges (such as the impact of life events like bereavement) were resolute across time, or at the very least left a lasting downward pressure on people's capacity for using digital technology in engagement. In these instances, opportunities for engagement and digital training, or relational support, did not become available or were not sufficient to counter the depth of these challenges. In this respect challenges

regarding geographic location and structural aspects and ageism were simply more entrenched, and by their nature involved meso and macro level factors that were not easily circumvented at the level of individuals or their groups. It is also difficult to isolate the effects of certain factors on the capacities of older people to overcome more individual level challenges regarding technology exposure, supportive relationships, and attitudes. These include costs of digital technologies, structural and normative forms of ageism, and depleted or insufficient investment in community-based technology infrastructures on the capacities of older people to overcome more individual level challenges regarding technology exposure, supportive relationships, and attitudes. The wider picture of public discourses on ageing and technology garnered from the social media analysis combines with findings on individual subjective experiences to highlight that exclusion and ageism can be a pervasive social and digital phenomena (Age-Platform, 2024; Leppiman et al., 2021; Ayalon et al., 2020; Kim et al., 2020). As others have shown (Kottl et al., 2021; Lund, 2021), the research also indicated the potential for these constructs to be internalised as notions of self-blame, and as a personal responsibility within the older population.

Many of the challenges found in this research have also been associated with barriers to taking part in society more generally (e.g. life roles, education; location; weak networks; lack of income, etc.) (Serrat et al., 2020), and suggests that there may be a compounding effect when introducing digital technology into these circumstances. There is enough evidence within this research, however, to also suggest that technology, if harnessed and supported correctly, could serve to moderate the effects of these factors. Put simply, virtual participation may help overcome limited engagement opportunities in local settings, restricted familial and friend networks, and even help elevate voices and combat inequalities in relation to access and representation (Fischl et al., 2020). For some participants in this research, it was evident that some of these benefits were already being realised. For others, it was clear that more concentred efforts to invest in and support their agency and interest in digital technology was needed to leverage such positive outcomes.

What is clear is that being engaged as individuals and within groups was often a core part of people's lives and an important factor in defining who respondents and participants were. This was not always about absolute levels of engagement. Instead, engagement was often set relative to people's own comfort levels and preferences with regard to taking part, and with respect to their own interests, hobbies and roles. While engagement could ebb and flow across someone's life, it was also evident that later life was a critical period of engagement, where engagement activities were one of the remaining channels available to people for on-going personal development. It is for this reason that it is perhaps not surprising that many people found their way to technology through engagement – whether that was through their hobbies, interests or roles in local communities. The use of digital technologies was therefore largely faciliatory of these other, mainly in person, engagement modes, and thus virtual participation remained as a secondary option. Across social participation, information access and advocacy, the vast majority of people very clearly asserted that in-person engagement was paramount. It is in this light that while direct virtual forms of participation were observed this preference for engagement must be respected. It is also in this light that it would seem appropriate that ARI would play a more defined role in supporting the use of digital technologies as a facilitatory tool in the short-term, and in ensuring an equitable age-inclusive digital transformation in the longer term.

Response Areas, Recommendations and Actions

In response to the findings of the research, there are five areas that require specific attention. These areas are presented along with recommendations, and key actions relevant to the levels of local ARAs and their members, the ARI national organisation and the level of external national government, public bodies and civil society groups (labeled as 'Ext' below). Informed by the evidence-based deliberations within the Virtual-EngAge Translation Forum, these response areas have been identified as holding value for those of no, low, medium and high technology proficiency. They will also assist in enhancing the potential of individuals and local ARAs in initiating, coordinating and participating in engagement with the support of digital technologies.

A balanced and fair digital transition

There is a need to ensure that the integration of digital technologies in ageing societies is managed in a fair and effective manner. Digital engagement is becoming a key requisite and enabler of societal participation and social citizenship, across social, civic, and political realms. It is also becoming a distinct sphere of this participation in its own right. However, along with recognising the substantial benefits that can arise from digital technology for engagement, there is a need for awareness of the increased risk of inequality that many older people can encounter during this period of rapid digitalisation. As such, it is necessary to remain vigilant of how emerging technology-related barriers can prevent older people, from different backgrounds and circumstances, from participating in the core areas of society and from exercising their full rights as citizens of society. Given the importance afforded to engagement as a means of self-expression and personal development within participant accounts, it is essential that choice and autonomy with respect to engagement is facilitated as a matter of social rights – including the right not to use technology. This must be a central pillar within any developments regarding digital technologies and ageing. It is also in line with calls for equity of access for older people in digitalised societies by the European Union Fundamental Rights Agency (2023), Age-Platform Europe (2024) and Principle 20 of the EU Pillar on Social Rights regarding access to essential services of good quality, including digital communications, and support for those facing barriers to access such services.

In the drive towards digitalised societies, the importance of access to in-person essential services and in-person participation channels must be reaffirmed as the fundamental right of citizenship for people in later life.

ARA A.1.1 Record instances of non-access to on-line services/engagements, and lobby local politicians, local authorities and related organisations for non-digital access options.

ARI A.1.1 Work with other national organisations to campaign nationally for equity of access to civic and community participation channels, and essential services.

Ext A.1.1 Cross-departmental action is needed by Government to recognise, stipulate and legislate for non-digital access, including working with the Irish Human Rights and Equality Commission (IHREC) to enforce and build awareness of existing equality legislation.

Social rights of older people must be central within the development and implementation of any policy and programme related to digital engagement in order to cement older people's entitlement to use appropriately designed technologies, and to be offered non-technology, in-person engagement options.

ARA A.1.2 Build awareness of fundamental social rights amongst members with respect to rights to access essential services, and community infrastructure.

ARI A.1.2 Promote, and where possible facilitate, meaningful engagement of older people in the design and development of digital-related policies, programmes, devices and systems.

Ext A.1.2 Government must mainstream ageing and the need to meaningfully engage older people within all policy that is related to digitalisation and digital innovation, public services access and civic/social engagement.

Public Duty enabled digital engagement

In line with European Commission goals regarding a just and fair digital and demographic change transition, digital engagement for older people must be actively supported. On the basis of Public Sector Duty there is a need for public bodies and the State to promote equality of opportunity for older people, within an increasingly digitised Irish society, and eliminate direct and indirect discrimination arising from unfair treatment – in this case relating to technology-supported and virtual forms of engagement. These duties require a multifaceted set of structures and supports that address individual and group-level needs, concerns and spatial contexts regarding digitalisation and access to key engagement resources. There are clear strategic and leadership deficits regarding how to manage the intersection of these transitions. This is despite the significance of digital and demographic transitions, and the potential for people to be left behind – either through not being sufficiently enabled to utilise digital technologies or not being sufficiently served through non-digital means. There are also clear resourcing deficits with regard to supporting individuals, groups and local communities, which range from challenges on basic digital literacy, to appropriate training and development, and capital infrastructure.

National state leadership is required to ensure that the transition to digitalised ageing societies is effective and fair, and must be grounded in a defined strategic direction developed and agreed with relevant state agencies, civil society organisations, private industry and, critically, older people themselves.

ARA A2.1 Call on local politicians, local authorities and related organisations to implement comprehensive digital equity strategy for ageing societies.

ARI A2.1 Work with national ageing organisations and key civil actors to mobilise calls for a national digital ageing strategy and implementation programme.

Ext A2.1 National Government leadership, in the form of a national strategy and adequately resourced implementation, is required on digital equity for older people, including governance and accountability for digital access, literacy, and participation.

A structured programme of training and development must target individual and collective older adult engagement, must be informed by a lived experience perspective and through a flexible set of approaches (including in-person and one-to-one instruction), and must cater for and support those individuals and groups with a lack of technology exposure, formal education and different levels of literacy and digital literacy.

ARA A2.2 Encourage and structure local peer-led supports, and work with local libraries and local Education Training Boards (ETBs) to identify digital training opportunities.

ARI A2.2 Target resources to commission/develop a national training and development programme for digital engagement, incorporating lived experience and peer learning.

Ext A2.2 In conjunction with the National Adult Learning Agency and the national network of ETBs, the Department of Further and Higher Education, Research, Innovation and Science must work to develop and resource a digital literacy strategy for later life.

Empowered engagement culture and attitudinal shift

A supportive and constructive culture must be fostered in relation to digital technologies and digital engagement in later life in order to advance more positive aspirations around digitalised ageing societies and to combat entrenched social barriers. This must incorporate an attitudinal shift in how older people and their use or non-use of digital devices are viewed amongst different facets of society. On one hand, the value of investing in supported digital engagement in later life must be promoted, within the context of a society's responsibility and on the basis that digital technologies might enable and sustain positive contributions that older volunteers, individuals and groups make to their communities. On the other hand, systemic ageist associations regarding ageing and older people and their use of technologies and other resources must be challenged. This includes the need to address negative discourse regarding the entitlements of older people to counter inaccurate assumptions of asset hoarding, and to circumvent feelings of guilt amongst older people themselves. It also includes the homogenised, ageist views of older people that can impede equitable treatment and that segregates their views from key decisions and developments regarding technology and society. As others have noted (Peine et al., 2024), an inclusive culture must incorporate the empowerment of older adults in relation to technology. This is necessary to build confidence in their own capacity to use digital technologies for engagement, should they decided to do so, and to address fundamental challenges regarding fear and trust that can drive reluctance to adopt devices. As a part of this process, there must be a concentrated effort to build awareness of the diverse range of digital capabilities and digital technology use amongst older populations. Without such a shift in culture, blame and/or self-blame is likely to continue to be a challenge.

In conjunction with older adult advocacy and representative organisations, relevant state, community and voluntary and private organisations must actively promote supported digital engagement amongst older populations of different ages and different backgrounds, highlighting the significance and relevance of digital technology for their daily lives.

ARA A.3.1 Identify and build awareness of ways to enhance and expand local activities and local engagement opportunities through the use of digital technologies.

ARI A.3.1 Raise the profile of later life engagement, the potential of supported-technology use to enhance this engagement, and older people's capacity to be engaged technology users.

Ext A.3.1 Elevate the potential of, and point to opportunities for, supported digital engagement amongst heterogenous older populations through cross-sector campaigns.

A dedicated focus on building trust in digital communications and online participation is necessary to help address perceptions of risk and fear amongst older people, while encouraging responsible and informed use of digital technologies.

ARA A3.2 Local training and information sessions should be organised regarding on-line and digital device safety, security controls, and critical appraisal of information.

ARI A3.2 Lead/co-lead the development of a digital-safety programme as a national resource, building capacity for online safety and assessing digital trustworthiness.

Ext A3.2 Technology companies, and public and private service providers must clarify and enhance digital controls and protections for older people, creating age-friendly digital infrastructures, increasing awareness of known scams, and building consumer confidence.

Systemic forms of ageism in relation to older people's use of technology must be addressed, combatting negative and problematised associations and framings within public and political spheres, technology and innovation industries, and policy and product development processes.

ARA A3.3 Raise members' awareness of ageism, the need to recognise and report age-based discrimination and the impact of self-ageist views related to digital engagement.

ARI A3.3 Collate members' experiences of age-based discrimination relating to digitalisation, and highlight prevalence and impact in a campaign to counter digital ageism.

Ext A3.3 Government needs to implement cross-departmental action to reinforce implications of age-based discrimination with respect to digitalisation, working with IHREC to raise awareness and enforce legislation on age-based equality in this space.

Mobilising engaged places

Communities, neighbourhoods and their local infrastructures must be supported and equipped to fulfil their key role in facilitating in-person engagement and in enabling technology-supported and virtual engagement. This is true for all groups across all stages of the life course, but is particularly impactful in later life where the reliance on immediate environments for resources and services can be more critical. In line with core objectives of age-friendly environments, communities and neighbourhoods therefore serve as brokers of engagement. They have, as such, the potential to assist in simplifying and enhancing pathways to engagement for older people. Local ARAs are embedded within these settings fulfilling, or potentially fulfilling, an important dimension of this brokerage. However, even with this collection of local levers that can mobilise engagement, there are notably absences across telecommunications, mobility and local organisational supports that strain the potential and sustainability of the role of communities. These absences are patterned by degree of rurality in many instances, but also by aspects of peripheralization through centralised investment, or lack of investment in different rural and urban settings. This has led to an uneasy tension, where on the one hand communities are left to their own devices to contend with service, engagement and infrastructural gaps because of their resourcefulness and resilience, and on the other hand where the full recognition of the value of these settings for engagement (of all modes) has not been realised. For the purposes of ongoing community development, as well as later life engagement, a more structured approach to address these absences should be developed. Such approaches should harness existing local efforts with respect to the activities of ARAs and local age-friendly programmes.

The development of basic digital communications infrastructure (e.g. broadband; high efficiency telecommunication networks) must be prioritised in digitally under-served community contexts as a 'Public Duty' to ensure digital access is not spatially, or age stratified.

ARA A4.1 Record and continue to highlight deficiencies in local infrastructure, charting gaps and impacts related to digital engagement and digital exclusion.

ARI A4.1 Utilising locally recorded gaps and impacts concerning digital communications, work with the Central Statistics Office, to highlight critically underserved ARA regions.

Ext A4.1 Ensure the full universal implementation of the national broadband plan, and assess its capacity to ensure a spatially integrated digital infrastructure.

Creative approaches to repurpose and reharness existing community resources as local digital-engagement hubs need to be more readily implemented, addressing issues of regional digital connectivity and deficits in wider engagement opportunities in local settings.

ARA A4.2 Identify local resources, and work with local partners (schools; libraries; community centres) to establish flexible and/or pop-up digital engagement hubs.

ARI A4.2 Develop a toolkit to establish local digital engagement hubs in conjunction with technology and consumer organisations, local authorities and Age Friendly Ireland.

Ext A4.2 The Department of Housing, Local Government and Heritage should establish a seed funding digital ageing development grant to incentivise establishment of hubs.

An assessment of three-fold gaps in engagement structures must be conducted for Irish communities, drawing out singular and combined clusters of digital disconnection, depleted enablement infrastructure, and low-level engagement opportunities, to allow for targeted resource allocation and tailored approaches.

ARA A4.3 Recognise and record these multiple gaps, and lobby local politicians, local authorities and related organisations for formal assessment and action.

ARI A4.3 Work with the Central Statistics Office (CSO) and Póbal to explore the prevalence of these communities and supportive mitigation measures.

Ext A4.3 As a part of age-friendly development programmes, local authorities should be tasked with assessing the three-fold gaps in local areas and instigating local action plans.

Equity and life-course informed digital engagement

Whether involving in-person or virtual participation, active engagement has to be inclusive of all older people. Accordingly, supports must extend beyond the general older population to specific groups where risks of precarity, exclusion and isolation from engagement can be greatest in Irish society. This includes developing a greater understanding of diverse preferences and needs and diverse expectations regarding engagement. This also includes the need to address prohibitive purchase and replacement costs of digital communication devices, particularly for those already at risk of material and social deprivation. Supports should as a result include a tailored approach to fostering equitable digital engagement amongst those who have had less opportunities across the life course; those from lower socio-economic backgrounds and those from under-served population groups.

National and local initiatives led by state agencies or civil society organisations must support older adults to overcome income and resource, health and mobility and other constraints in order to provide engagement pathways that are relevant and independent of individual socio-economic, health status.

ARA A5.1 Develop engagement opportunities accessible to all, including those from diverse backgrounds, canvassing and collecting views on preferences and needs.
ARI A5.1 Build awareness amongst groups the need to accommodate and support diverse and at-risk populations, providing guidelines and toolkits to foster inclusive engagement.
Ext A5.1 Assess and weigh the economic feasibility of introducing a digital communication allowance for older adult households against equity and efficiency benefits in relation to a digitally connected society.
There must be a greater mobilisation of relational networks for digital engagement, diversifying the sources of social supports – particularly for those without close networks.
ARA A5.2 Serve as a support broker, encouraging members to seek assistance where needed and connecting them with peers or local groups (schools) who can assist.
ARI A5.2 Establish a suite of instructional resources for networks to draw upon, to support peer-to-peer learning and support and foster intergenerational digital programmes.
Ext A5.2 State-led investment should be made available to help support the development of social support structures, intergenerational and otherwise, to foster digital skills learning and exchange in local settings.

References

Age-Platform (2024). Digitalisation and older people: our call to EU Policy Makers. Available at: https://www.age-platform.eu/content/uploads/2024/07/AGE_Paper-on-Digitalisation-and-Older-People_June-2024_FINAL-1.pdf

Astell, A., McGrath, C., & Dove, E. (2019). 'That's for old so and so's!': does identity influence older adults' technology adoption decisions?. Ageing and Society, 40, 1550 - 1576.

Ayalon L, Chasteen A, Diehl M, Levy BR et al (2020) Aging in times of the COVID-19 pandemic: avoiding ageism and fostering intergenerational solidarity. J Gerontol B. https://doi.org/10.1093/geronb/gbaa051

Chesley, N., & Johnson, B. (2014). Information and Communication Technology Use and Social Connectedness over the Life Course. Sociology Compass, 8, 589-602.

European Union Agency for Fundamental Rights, (2023) Fundamental rights of older people: ensuring access to public services in digital societies. Luxembourg: Publications Office of the European Union, 2023

Fischl, C., Lindelöf, N., Lindgren, H., & Nilsson, I. (2020). Older adults' perceptions of contexts surrounding their social participation in a digitalized society—an exploration in rural communities in Northern Sweden. European Journal of Ageing, 17, 281 - 290.

Gales, A., Loos, E., Gao, Q., Zhou, J., (2020). Organizational Culture Change, & UU LEG Research USG Public Matters. The Impact of the Relationship and Family Status in Retirement Age on Women's Incorporation of Technical Devices in Their Everyday Life. Human Aspects of IT for the Aged Population. Technology and Society, 12209, 207-225.

Kenny, R.A.; Scarlett, S; O'Mahoney, P. (2020) The Older Population of Ireland on the Eve of the COVID-19 Pandemic. Dublin: The Irish Longitudinal Study on Ageing https://tilda.tcd.ie/publications/reports/W5KeyFindings/index.php

Kim, H., Kelly, S., Lafortune, L., & Brayne, C. (2020). A Scoping Review of the Conceptual Differentiation of Technology for Healthy Aging. The Gerontologist https://doi.org/10.1093/geront/gnaa051

Köttl, H., Gallistl, V., Rohner, R., & Ayalon, L. (2021). "But at the age of 85? Forget it!": Internalized ageism, a barrier to technology use. Journal of Aging Studies, 59, 100971.

Leppiman, A., Riivits-Arkonsuo, I., & Pohjola, A. (2021). Old-age digital exclusion as a policy challenge in Estonia and Finland. In K. Walsh, T. Scharf, S. Van Regenmortel, & A. Wanka (Eds.), Social exclusion in later life. International perspectives on aging (pp. 409–420). Springer.

Lund, B. (2021), "Predictors of use of digital technology for communication among older adults: analysis of data from the health and retirement study", Working with Older People, Vol. 25 No. 4, pp. 294-303.

Nowakowska-Grunt, J., Dziadkiewicz, M., Olejniczak-Szuster K., et al. (2021). Quality of service in Local Government Units and Digital Exclusion of Elderly People – Example from implementing the AVATAR project. Polish Journal of Management Studies, 23(2), 335-352. https://doi.org/10.17512/pjms.2021.23.2.20.

McCosker, A., Critchley, C., Walshe, J., Tucker, J., & Suchowerska, R. (2021). Accounting for diversity in older adults' digital inclusion and literacy: The impact of a national intervention. Ageing & Society, 1-21.

Peine, A., Meissner, A., and Wanka, A., (2024). Digitalisation and population ageing: social policy dimensions of the digital divide and innovation. In: Leichsenring, K. and Sidorenko, A. (2024). A Research Agenda for Ageing and Social Policy. Cheltenham, UK: Edward Elgar Publishing.

Peine A, Neven L (2019) From intervention to co-constitution: new directions in theorizing about aging and technology. Gerontologist 59(1):15–21. https://doi.org/10.1093/geront/gny050

Pena, B.B., Clarke, R., Holmquist, L.E., & Vines, J. (2021). Circumspect Users: Older Adultsas Critical Adopters and Resistors of Technology. Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems.

Serrat, R., Scharf, T., Villar, F., & Gómez, C. (2020). Fifty-five years of research into older people's civic participation: Recent trends, future directions. The Gerontologist, 60(1), e38-e51.

Woolrych, R., Portella, A., Sixsmith, J., Smith, H. C., Garcia Ferrari, M. S., Makita, M., Menezes, D., Fisher, J., Lawthom, R., Murray, M., Crane de Narvaez, S., & Goodman, N. (2019). Place Age Place-Making with Older Adults: Towards Age-Friendly Cities and Communities. Age-Friendly Policy and Practice Guidelines and Recommendations. Place-Age. https://www.housinglin.org.uk/_assets/Resources/Housing/OtherOrganisation/Place-Age-Place-Making-with-Older-Adults.pdf

Research Team:

Dr. Margaret O'Neill, (post-doctoral researcher, ICSG and University of Galway), Dr. Arianna Poli (post-doctoral researcher, ICSG and University of Galway), Dr. Erwan Moreau (post-doctoral researcher, Trinity College Dublin), Dr. Brídín Carroll (post-doctoral researcher, ICSG and University of Galway), Prof. Carl Vogel, (Co-Principal Investigator, Trinity College Dublin) Prof. Kieran Walsh (Principal Investigator, ICSG and University of Galway) and Christine De Largy, (ICSG, University of Galway).

Research Collaborators:

Maureen Kavanagh, CEO, Active Retirement Ireland

Kevin Kelly, School of Engineering, Trinity College Dublin

Advisory Board Members:

Anna Esposito, Università delle Campania "Luigi Vanvitelli", Italy

Maureen Kavanagh, CEO, Active Retirement Ireland, Ireland

Kevin Kelly, School of Engineering, Trinity College Dublin, Ireland

Alexander Peine, Open University, Netherlands

Feliciano Villar, University of Barcelona, Spain

Please cite as:

ICSG (2024). Digitally-Supported Engagement: Pathways for Individuals and Groups. Virtual-EngAge Translation Report Series, Report no. 2. Irish Centre for Social Gerontology (ICSG). University of Galway.

The Virtual-EngAge Translation Report Series is based on and summarises a series of academic and working papers. These papers will be available from https://icsg.ie/our-projects/virtual-engage-2/ as they are published.

For further information, please contact:

Professor Kieran Walsh
Irish Centre for Social Gerontology,
Institute for Lifecourse and Society,
University of Galway,
Upper Newcastle Road,
Galway

Tel: 00 353 91 495461
Email: icsg@universityofgalway.ie
Twitter: @icsgUniOfGalway

Ollscoil na Gaillimhe
University of Galway

An Institiúid Cúrsa Saoil & Sochaí
Institute for Lifecourse & Society

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin