



DIGITAL BOOMERS

A THEORY OF CHANGE FOR
OLDER PEOPLE, TECHNOLOGY
& INDEPENDENT LIVING

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A PIECE OF WORK COMMISSIONED BY ESSEX COUNTY COUNCIL



Essex County Council

AND PIONEERED BY THE FOLLOWING COALITION



The Care & Wellbeing Company



BASILDON • BILLERICAY • WICKFORD



Essex County Fire & Rescue Service



Council for Voluntary Service Uttlesford



Supporting Carers across Essex



Anglia Ruskin University



Essex County Council



Essex Partnership University
NHS Foundation Trust





EXECUTIVE SUMMARY

Over recent months, RETHINK Partners and Essex County Council convened a group that included local and district councils, NHS, Fire, care delivery organisations and voluntary sector members from across the county. We asked: “How can technology be better used across Essex to promote independent living for older people?” and pooled our knowledge and experience around what may be enabling or hindering technology adoption amongst older people in the county. We gained insight across the county, meeting face to face with citizens and professionals: travelling to 24 of our towns and villages to have 160 face-to-face conversations, 21 in-depth interviews and 10 discussion groups. We discovered some perception-busting evidence on how our older people are using tech and considered what we might do to enhance this with regards their health and wellbeing. We’ve emerged from this work with a bold shared vision:

“By 2021, older people in Essex are the most tech confident in the world.”

We believe this is a respectable ambition based on what we found already happening in people’s homes and communities: tech is a pervasive part of daily life for most of our older people and they are using it as part of their daily rituals, except when it comes to their health and care needs. The ‘system’ needs to catch-up with people’s preferences and provide an infrastructure for professionals to more confidently recommend and promote health and care tech to champion more independent living and support local people to confidently utilise the best of what is available to them.

In brief, our insight found, that in Essex:

1. older people are more tech savvy than they realise and professionals and family members regularly underestimate this: we are a significant limiting factor through our unsubstantiated but deeply held assumptions
2. older people trust their peers to recommend tech and share experiences and are happy to learn from young people - they would also trust professionals to recommend health related tech
3. older people want to have fun with tech and don’t want to be targeted as ‘old people’
4. older people want to use tech to connect with their loved ones and sometimes have a competitive streak when adopting new knowledge
5. not every community has a go-to knowledgeable ‘techie’ person for advice and support, but where they do, it builds confidence and increases take-up
6. older people don’t feel they are doing tech ‘right’ and are just getting by – but this isn’t stopping them having a go
7. our community and voluntary sectors risk being digitally left behind by a lack of investment in skills and infrastructure due to old-style funding models – they could be providing vital support to older people with the right training and investment



In response to this we are proposing 6 areas for collective action across the Essex system to realise our vision:

1. **Digital Skills for All** – citizens and professionals confident and capable about technology as a core part of life and work
2. **Create Spaces and Opportunities** for people to **Explore** and **Enjoy** technology
3. Technology is a **First Line Response** for health and care
4. Essex is a **Leading Destination** for **Technologists & Innovators** and **Independent Living Technology in Practice**
5. Our working, care and living environments support a **Digital First Approach**
6. **Invest** in the **Community** and **Voluntary** sector so they can participate as equal partners

These are supported by two underpinning actions:

1. Create a **Radical New Commissioning Model** for tech enabled services
2. **Develop** and **Sustain Digital Boomers** as the system delivery vehicle for driving the change

Building knowledge, skills and confidence for a happier & more independent future

We now have a choice. We could wait for the inevitable shift in behaviours and skills that will happen naturally over time until everyone is using technology more effectively for independent living. Or we could be bold and confident that – based on the capabilities we’ve already found and the profound need for alternative health and care delivery models – we want to try to be proactive and at the leading edge of this social change. Digital Boomers is potentially the way to unite the efforts of different people and organisations in Essex who share this bold ambition. So, in order to unite organisations, professionals and families around an approach over the next three years which could harness the power of these capabilities and grow skills and confidence, we have co-designed a Theory of Change with a committed group of pioneers. This describes the target areas for intervention and the desired impacts. It is designed for the whole county to use as a simple basis for any digital or tech strategy involving older people. It is a working strategy with high aspirations that by 2021 older people in Essex are the most tech confident in the world.

We have a unique opportunity

This is an opportunity for Essex to tap into an existing curiosity and latent skill base to improve outcomes and lives by making the most of what is already available to us. It’s an opportunity to develop and lead as a system, what local people have already started. This is an opportunity to take the best of digital and tech and combine it with the most human of approaches to augment services for professionals, patients, customers and citizens alike. This work needs executive sponsorship from a few senior leaders who have a vested interest in driving this agenda for Essex and we need all organisations to come together to test and then deliver some of these interventions. Please read on, tell us what you think and how you want to get involved. For more information please contact: irene@rethinkpartners.co.uk



DIGITAL BOOMERS

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1. WHAT IS THIS OPPORTUNITY ALL ABOUT?

How can technology be better used across Essex to promote independent living?

Over the last few months, Essex County Council convened a group of people from very different backgrounds to workshop our shared knowledge and experience around what may be enabling or hindering technology adoption amongst older people in the county. The group included local and district councils, NHS, Fire and voluntary sector members from across the county. We asked: “How can technology be better used across Essex to promote independent living?”.

- what works for citizens?
- what works for professionals?
- where have we seen tech take-up work well?
- what have we seen or heard of that we want to explore further?
- what do we want to share?
- what do we want to explore & scale?

Our aim was to:

- gather insight and evidence to understand our starting point, but also what might be possible
- use this to set a shared vision and purpose for the progress we want to make in the next 3 years
- identify a broad spectrum of activities to move the Essex system towards achieving this vision – through collective action

Our approach

Our Collaborative agreed to work together over an intensive three months to begin to tease out some richer insight into digital and tech adoption and ageing, to help people maintain and expand their independence for longer. The ‘exam question’ to guide this work became: “How can technology be better used across Essex to promote independent living for older people?”. The timing was good, with all public and voluntary sector partners asking themselves what tech or digital means to their stakeholders, be they patients, customers, carers, citizens or professionals. Encouraging older people to use technology more for independent living is a shared opportunity that no single organisation can tackle in isolation. This had to work for everyone across the system and therefore had to be a thoroughly collaborative approach. There was a strong



appetite to go beyond traditional organisational digital strategies and gain a fresh understanding of our relationship with tech and that we may approach the subject differently at our respective contact points with local people. Partners wanted to challenge their assumptions, to indeed ask: “what do we actually mean by tech or digital?” and to understand the readiness of themselves, their organisations and the people they assist, to embrace, enable, deploy and support the use of technology to help improve or sustain wellness for longer, and thus promote more independent living.

We agreed to open up our organisations to work closely on a comprehensive ‘system-wide’ collaboration which would allow us to get under the skin of tech and digital – both of which have become ubiquitous themes, but ones which we recognised were poorly understood, lacked coherent definitions and were therefore at risk of being poorly harnessed. We all recognised that ‘digital’ was talked about everywhere – but struggled to name where it was actually positively impacting on our work or our organisations.

Finally, we also recognised that this work sits in a broader strategic context for partners working together in Essex. Digital and technology are not only core elements of almost every local organisational strategy and of STP¹ plans, but will enable how we join up health and care services and is at the heart of Essex County Council’s own strategy. Digital Boomers could make a significant contribution to delivering the ambitions of “The Future of Essex” and the Essex Vision², namely:

- ageing well and
- connecting people

This was about taking the best of technology and combining with a human and social approach to allow us to work in a targeted way to deliver meaningful insights into our relationship with technology.

¹ Sustainability and transformation plans (STPs) are where NHS organisations and local authorities come together to develop five year ‘place-based plans’ for the future of health and care services in their area.

² The Essex Vision is the ambition of *Essex Partners* – an emergent collaboration of organisations in the county who are uniting their leadership to tackle, head-on, some of the most difficult challenges facing the community. It is giving the many different communities, groups and businesses a way to collaborate to plan for a future where they can unite, transcend short-term agendas and set out the kind of Essex we all want to live in.



Why this issue is important

We had just one assumption at the beginning of this journey: that it's a given that assistive technology can help people live independently for longer in their own homes and should have a beneficial impact both on the quality of life for people and their carers and delay, or reduce the need for social care and health services. We meant 'assistive' in its broadest sense – i.e. that would include any tech or digital that might provide support.

However, deployment of this technology at scale beyond the use of relatively simple, low cost products such as apps and monitored alarms, has not yet taken place. We wanted to explore how we can remove barriers to this in Essex and test and build new strategies to help local people harness technology, not for technology's sake, but in a way that invests in the people of Essex's digital skills today, for better outcomes tomorrow. This is important, not just due to the benefits to citizens, families and professionals and their quality of life, but for services in Essex, facing some significant changes in its ageing population:

- Essex is home to around 1.7 million people and the older population is expected to grow to 28% by 2033
- The number of residents over 75 years is expected to increase significantly over the next 20 years with major implications across housing, care and health provision
- The prevalence of dementia, which increases rapidly with age, is projected to increase by 38% by 2021
- Over half of the people providing unpaid care are people aged over 50, and more likely to be suffering from ill health themselves
- It is estimated that the number of people over 65 years living on their own will have increased by around 48% by 2025³

Put simply, technology has the power to be a force for good in the lives of older people whilst also potentially reducing the cost of delivery and reducing demand for health and care services. With our local demography in Essex we need to be at the forefront of exploiting this opportunity, in a conscious and confident way. "We must listen to what people want from technology, how it can support and augment our lives. And we must not let change happen to us because we were too busy looking at our phones." Martha Lane Fox, Founder and Executive Chair Doteveryone⁴

³ Source: Essex Health and Wellbeing Strategy 2013-18.

⁴ "People, Power and Technology: The 2018 Digital Attitudes Report", Doteveryone. Doteveryone is a think tank that champions responsible technology for the good of everyone in society. It has just published its first report on the UK's digital attitudes.



Methodology

We took a blended approach to acquiring insight for Digital Boomers. Conventional research methods helped us explore existing data around how amenable older people are to using technology for independent living and health. We wanted to understand the evidence, but also to relate this to our local context in Essex.

We commissioned two pieces of research:

1. An academic literature review
2. In-depth, on-the-ground insight

These two reports were triangulated by the work of the steering group.

Anglia Ruskin University (ARU) undertook a literature review and RETHINK Partners collaborated with HealthWatch Essex Insight to work with partners to reach a broad cross section of older people and their support networks in Essex. The ARU literature review looked in detail at a 12-year period of research into this area. This literature review correlated with all the findings of our own insight across Essex, and thanks to the openness of the people we spoke to, our own insight yielded a few more too. We travelled to 24 towns across the county and had 160 conversations, 21 in-depth interviews and ran 10 discussion groups. We spoke to people very broadly about tech: what technology meant to them; what tech they used and what for; what were the barriers to using technology and who or where they trusted to recommend technology. Almost everyone we spoke to went beyond this to help us build a holistic picture of: how local people and professionals genuinely felt about tech; what was working well for people; the opportunities and motivations for getting more comfortable with health and wellbeing related tech.

The power of conversations

The fundamental act of starting a conversation about this topic appeared to inspire people to talk openly and think about their own lives, families and professional roles. Families reflected on how they were interacting and influencing each other's behaviour and indeed whether they were helping or hindering tech confidence. Professionals broadly felt frustrated at the limitations in their sector and roles: either not feeling confident enough to encourage or recommend tech, or feeling hindered by not having sufficient time in their roles to properly embed confident use of tech with the people they work with. There was a sense of not having a comprehensive knowledge-base and toolkit to work from, few opportunities to properly myth-bust and showcase tech to potential users and most importantly the time to spend with people to fully train them.



Key findings that shaped our priorities in a Theory of Change for Essex

There were 12 key findings that were strongly apparent regardless of demographics, geography, environmental or circumstantial factors. These were as follows:

Tech is pervasive

Tech is a part of daily life for most of our older people and our top insights are as follows, told from the perspective of the older people we met:

1. we are more tech savvy than we realise
2. we all underestimate how tech savvy we are
3. we trust our peers
4. we are happy to learn from young people
5. we trust professionals – to a point
6. we want to have fun
7. we don't want to be targeted as old people
8. we want to connect with our loved ones
9. some of us have a competitive streak
10. not every community has a 'Nigel'⁵ (see full insight report in appendix 2)
11. we like tablets (especially iPads)
12. we don't feel we are doing it 'right', but nobody does!

Please see the appendix for the full ARU academic literature review and the RETHINK – HealthWatch Essex Insight report.

⁵ A 'Nigel' is the name we have given to the son or neighbour (we only heard of male ones) who is the go-to person in a community to resolve queries about tech.



2. OUR THEORY OF CHANGE

We have used a Theory of Change to communicate our ambition as it sets out a clear way ahead that can be easily communicated and shared with others. It provides us with a single narrative for our challenge and a clear call to action for us all with a logical set of interconnected activities that people can contribute to. The change that we desire is ambitious and will only be achieved through the efforts and activities of many people – in our communities and organisations - playing their part in pursuit of a shared goal.





Where we would like to move first

Areas for collective action across the Essex system to realise our vision:		
1. Digital Skills for All – Citizens & Professionals	2. Create Spaces and Opportunities for people to Explore and Enjoy technology	3. Technology is a First Line Response for health and care
<ul style="list-style-type: none"> • staff training • digital buddies • intergenerational activities (e.g. girl guide badge) • on-line support • user friendly guides 	<ul style="list-style-type: none"> • show home for technology • borrowing scheme • on-line resources • tech buddies • older vloggers • connect to others already in this space • awareness days 	<ul style="list-style-type: none"> • tech assessment • care planning • care delivery • specialist tech roles while we transition • tech prescriptions
4. Essex is a Leading Destination for Technologists & Innovators and Independent Living Technology in Practice	5. Our working and care environments support a Digital First Approach	6. Invest in the Community and Voluntary sector so they can participate as equal partners
<ul style="list-style-type: none"> • test bed / ARU SLA • independence • other innovation initiatives e.g. West Essex DIZ (Digital Innovation Zone), Southend Borough Council, NHS MSB Group innovation fellows (Mid Essex, Southend & Basildon) 	<ul style="list-style-type: none"> • leadership • infrastructure: Wi-Fi, network • data sharing • buildings and homes 	<ul style="list-style-type: none"> • invest in voluntary sector digital infrastructure • embedding provision & upgrade of IT into commissioning and grants including training for staff • joint projects with third sector
7. Create a Radical New Commissioning model for tech enabled service	8. Develop and Sustain Digital Boomers as the system delivery vehicle for driving the change	
<ul style="list-style-type: none"> • creating digital commissioners • build a new framework for relationships with providers that supports and incentivises tech as a first line response • developing shared knowledge between commissioners and providers about how tech can best be used to support independence 	<ul style="list-style-type: none"> • system based leadership and delivery model • digital champions • sustainability strategy to transition after pilots • digital footprint for Digital Boomers • communications strategy for informing and recruiting others 	

We recognise that some work on these actions is already happening or being led and planned elsewhere. For example, plans to create Wi-Fi-enabled environments in all our public-sector buildings are underway; ECC has just commissioned PA Consulting to lead a prototype model of Digital Boomers: A Theory of change for older people, technology & independent living



upskilling frontline staff about assistive technology and NHS EPUT is working on a pilot with Alexa and people with early stage dementia. So, we do not intend that Digital Boomers has a monopoly on leading and delivering this work – quite the reverse. We need the efforts and activities from a distributed range of players with specialist skills to move towards the audacious goal for Essex.

Digital Boomers, however, is intended to:

- provide a coherent framework and narrative for how all these disparate efforts can come together to achieve a great collective goal
- identify gaps – through insight and evidence – where we want to start new work or do more
- create a framework for tracking and evaluating impact over time towards our shared ambition

The 6 areas for collective action across the Essex system to realise our vision are:

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7. Create a **Radical New Commissioning Model** for tech enabled services
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Guiding Principle

This is a journey for the whole of Essex society to embark upon together wherever possible. Let's explore and skill-up together: be it inter-organisational, across sectors or mixing citizens and professionals. Therefore, wherever possible, our priorities and intended interventions are that we approach all areas of our Theory of Change together: as citizens, public, community and voluntary sectors.



The priority areas for collective action across the Essex system

Our first priority:

Digital Skills for All – citizens and professionals

- People are curious and broadly have a good level of competency but need help to do more and feel more confident
- Likewise, families and professionals need to dispense with old assumptions and dynamics and therefore help, not hinder
- We know that older people like learning from each other so let's create an environment where we can create the support and infrastructure to create a 'show and tell' culture amongst peers

Our second priority:

Create Spaces and Opportunities for people to Explore and Enjoy technology

- Professionals and citizens need more opportunities to try out tech and play with it
- We need neutral, attractive and fun places to showcase tech which will provide safe places for advice and to allow us to see a broad spectrum of assistive tech in use
- We have to make it easy for people to try out tech before they buy – such as borrowing/rental schemes
- This will provide multiple learning and upskilling opportunities

Our third priority:

Technology is a First Line Response for health and care

- This will require the biggest shift in attitude, culture change and practice, however professionals currently feel their hands are tied in accessing or recommending tech
- Need to simplify the marketplace landscape for professionals wishing to recommend tech
- We need to communicate and promote products, services and positive case studies
- Benefits go beyond improved wellness, savings and resources to a more skilled and happier workforce
- If we get this right, we have the potential to bringing communities together to be healthier, happier and better connected

Our fourth priority:

Essex is a Leading Destination for Innovators and Independent Living Technology in Practice

- We have an enviable demographic profile in Essex which would be perfect for testing and pioneering new technologies, or new ways of deploying technology for health. By becoming a destination for innovators, we can generate more health, wealth and pride



- We want to be a destination for professionals to live and work and to feel proud of our curiosity and capability

Our fifth priority:

Our working and care environments support a Digital First Approach

- Professionals and the 'system' could be more of an enabler than a barrier
- We want tech to become our first response when looking at strategies, interventions, and tactics. It doesn't mean it should always be deployed but it should always mean an improvement in user experience
- Assessing for digital care planning, care delivery and care giving

Our sixth priority:

Invest in the Community and Voluntary sector so they can participate as equal partners

- Upskilling – investing in skills and roles
- Bringing the sector along with the public sector when it upgrades or invests in tech
- Commission for a more tech focused community and voluntary sector by incentivising and supporting

Our seventh priority:

Create a Radical New Commissioning model for tech enabled services

- We need to take some brave decisions in how we commission, fund and incentivise performance for digital development of workforce and services
- This will result in more effective service models, improved wellbeing, a more skilled workforce, greater confidence and independence in our communities and improved connectivity within those communities and across them

Our eighth priority:

Develop and Sustain Digital Boomers as the system delivery vehicle for driving the change

- We need to build an infrastructure to enable leadership and systems support
- We must communicate the ambition: raise awareness; demystify tech and promote opportunities to participate
- We have the opportunity to create a sense of identity and pride for Essex as a result of going where the will of local people and the opportunity already is
- Digital Boomers needs its own digital footprint to celebrate, inform, support, connect and track progress as we move forward



3. INSIGHT AND EVIDENCE – MORE DETAILED FINDINGS FROM OUR KNOWLEDGE-BASE

In speaking to frontline staff; customers; stakeholders; loved ones; technologists and technophobes alike, we began to see some common themes emerging.

Our Fellow Explorers

We found our fellow explorers through the following routes and from those routes blossomed new ones, because people really enjoyed talking about tech.

1. Action For Family Carers – customers & staff
2. ECL – customers in a range of wellbeing hubs & staff
3. Essex County Council TEC Team
4. Alzheimers Society Café – users and staff
5. Community Sheds West Essex – users and staff
6. Rainbow Services staff
7. Community 360 Winter Warmers - attendees
8. Uttlesford Council residents & wardens
9. EPUT mental health and community services staff
10. Provide staff
11. Basildon Council
12. GP
13. NHS Staff, chronic condition clinic, hospital
14. Essex Fire Service – staff
15. Occupational therapists
16. Social care workers
17. Residents in their homes

Our insight - what people in Essex told us about technology in their lives

We got a strong sense of where people spent their time; where they get their information; who they speak to; who they trust and who has power and influence over tech decisions. It became apparent that the key themes were around:

- a lack of recognition about how tech savvy older people are in Essex and the prominent role it plays in their daily life and rituals. People were often engaging in a raft of digital activities without recognising that it was tech
- there is a lack of confidence amongst the vast majority of older people in recognising their tech skills: this appeared to be compounded by wider societal negative stereotypes



of older people and tech “You lose confidence you thought you had. Deep down you know you can, but you’re frightened you can’t.”

- there are strong familial drivers in the type of tech people use and in discovering tech - and that this plays into relationship dynamics and even gender roles. It appeared that the ‘roles’ people had adopted in relationships such as marriages, might continue on into retirement. This even applied in the cases of where one partner had developed an illness like dementia.
- peer groups are important influencers for older people in giving them the confidence to try new technologies – including building their trust in areas such as online payments and social media “Seriously, Skype: you’d get such enjoyment out of that one app.”. Even during our focus groups, we witnessed people shift opinions around trust and perceptions of enjoyability based on the experiences of other members. It gave individuals a new curiosity and confidence to try new tech
- we encountered some contradictions when speaking to people who sometimes began a conversation lamenting the over-reliance of tech today, who later disclosed they used tech a great deal. This correlates with the national findings in the Digital Attitudes 2018 survey that found: “Society is not divided into tech-lovers and luddites—people hold these apparently conflicting attitudes simultaneously. And some feel discomfort around their own reliance on technologies.”⁶

What tech are older people in Essex using?

The vast majority of people we spoke to from pre-retirement age up into their late 80s had a smartphone and other devices and were using the following devices/platforms/software to meet their needs and wants: Smartphones; iPad; Alexa; Kindle; Laptop; PC; WhatsApp; Trip Advisor; Netflix; Facebook; FaceTime; Careline; booking holidays; shopping; online banking; online news; Notes app for storing information such as recipes and authors; TV streaming; online bingo; Photoshop; Snapchat; Online Scrabble; Tynetech pendant with speech module – and were going online to stay involved with hobbies and passions including horse racing, local history, motor sport, literature, cooking and gardening: “I know what I want. I spend my life on the internet.”

The social aspect, be it clubs and hobbies, playing multi-player online games with friends; video calling friends and family and social networking sites (predominantly Facebook) were popular activities. Again, these findings were echoed by the new national data from the Digital Attitudes 2018 survey:

- Now 91% of the UK population have the basic digital skills to access the internet

⁶ “People, Power and Technology: The 2018 Digital Attitudes Report. Doteveryone.”



- The things people value most are making daily tasks more convenient (80%), providing opportunities to try new things, meeting new people and learning something new (68%), and using social media to keep in touch with family and friends (52%).
- Half (52%) wouldn't be able to get through all the things they need to do every day if they didn't use the internet.⁷

There were a few examples of people becoming apparently somewhat tech resistant in retirement, despite having used tech for previous decades. There was a sense of relief at not having to just "get by" with tech, which stemmed from a common theme that "we were never taught how to use technology" and "when I retired I thought 'thank goodness that's not my responsibility any more'". However, all of those individuals also described significant tech competency and presence in their daily lives.

Assistive technologies

We encountered a very low use of health related or assistive technologies. Some residents living in sheltered accommodation had a pendant voice device to communicate with their warden and some of the customers at wellbeing hubs had a falls/safety pendant. None of them recognised it as "tech". Everyone we spoke to said they would be open to recommendations for health and wellbeing tech from professionals but, even those with health or social care needs were unaware of what assistive tech might be available to them.

The only instance of someone recalling being recommended tech was an attendee at one of the Alzheimer's Society's Dementia Cafés where they had been suggested a product by a fellow carer. Clearly word of mouth is strong and an important source of trust and recommendation, therefore people rely heavily on family recommendations for new tech additions to their lives. However, there were also cases of grandparents leading the tech revolution within their families. Such as the grandmother who had read about Alexa and had bought it for her children and grandchildren because she found it useful and fun, before then acquiring one for herself.

The role of tech for carers

Carers told us how important tech was to their lives. Not only did it help them optimise their busy and time poor days, but as one carer of a partner living with dementia told us: "It's my lifeline. My world is collapsing and getting smaller by the day." Many professionals noted that, although they weren't personally able to support the use of tech with patients and customers, that "the

⁷ "People, Power and Technology: The 2018 Digital Attitudes Report. Doteveryone"



system” was the barrier and that: “Patients are way ahead of us. We have some catching up to do.”

Front line staff echoed this, regardless of the field they worked in. There were often initially assumptions about the capability, but on further discussion they all had examples to relate, of patients and customers who were surprisingly independent and exploratory with their tech. In every conversation with professionals, they instinctively reflected on their own families and mostly commented on how they had perhaps underestimated the capability of loved ones, or indeed confessed that their own lack of time or impatience could have undermined the capability of their parents or grandparents. This often lead to interesting conversations about family dynamics which allowed us to see the influencing factors fall within four broad categories:

Influencers on older people on their tech attitudes and skills

1. environmental – this could be economic, housing, peer group
2. life experience/perception – roles within family dynamics, professional background, politics
3. current situation – health, interpersonal circumstances such as bereavement
4. personality – ultimately whether someone has a cynical or ‘can-do’ mentality

The Voluntary and Community Sector

The 2018 Charity Digital Skills Report supports our belief that the community and voluntary sector needs a fairly radical rethinking of how the public sector supports, partners with and commissions it. Their research indicates that: “Just under a third (32%) of charities have a clear strategy for how digital can help achieve their charity’s goals and only 14% of charities are planning for how emerging tech could affect their work. However, if the way their charity uses digital doesn’t improve, 39% of respondents are unsure if they will stay in their role in the long term or are planning to look for a job at another, digitally savvy charity.”

This not only indicates that the majority of charities aren’t aligning their digital and corporate strategies, but, don’t know what’s coming next. The suggestion that a significant proportion of employees would seek alternative employment with a more digitally astute organisation leaves a large proportion of organisations – and therefore citizens – at risk of getting left behind.

However, there is good news, certainly in Essex. We found that our community and voluntary sector spotted these challenges and others early on in this work and Digital Boomers has come



up with a range of possible solutions to transform this area and potentially unlock benefits for commissioners too (see the Theory of Change).

Academic Literature Review – how do we compare to the rest of the world?

Anglia Ruskin University was commissioned to undertake a literature review of factors associated with digital activation in the UK and internationally at an individual and population level. The central question guiding the review was ‘what are the factors associated with adoption of digital technologies?’.

Comparing global research spanning the last 12 years, ARU found that for the most part, smart assistive living technologies have, so far, underperformed their potential, with low uptake, high abandonment, and numerous challenges (monetary, operational, technical, social, ethical, clinical, etc.) hampering their introduction into mainstream health and social care systems.

It concluded that, in order to achieve assistive technology that matches the needs of the users, the focus should be interdisciplinary and it should employ a recursive dynamic between design of the technology and incorporation of the needs of the user and their ecosystem. It identified the challenges for the health and social care sectors as how can they develop procurement and service delivery models that can enable this transformation (see our Theory of Change point 7 – Create a radical new commissioning model for tech enabled services). It also recommended that, regarding policy challenges, a means of providing an overall strategic direction, which encourages local adaptation, will need to be developed (see our Theory of Change point 8 - Develop and sustain Digital Boomers as the system delivery vehicle for driving the change).

Finally, the ARU academic literature review suggested that these ideas will need to be put to the test in real-world settings and findings from them can guide feasibility for industry, for health and social care services and for policy makers, as to how best to give the user what they want and what they need. This highlights the overarching ambition of our Theory of Change, to become a world leader in independent living, replicating our fourth ambition in our Theory of Change “Essex is a leading destination for innovators and independent living technology in practice” and indeed our overall ambition that: By 2021 we want older people in Essex to be the most tech confident in the world.



4. WHAT HAPPENS NOW?

Digital Boomers has created this theory of change to provide a single narrative for this challenge. We have an opportunity to capitalise on an already thriving part of people's lives to support a positive culture change in Essex which could do some amazing things for the people that live and work here.

We are proposing: a place-based approach to supporting older people, carers, families and professionals to embrace and be active around using technology to support independence and independent living. This is a system-wide distributed approach to social change, but with a co-ordinated programme at its core to get things going. We want to get Essex on the map as a leading system for health and care technology to support independence.

Working with older people is a great place to start. Some of the ideas we have generated are cutting edge and some may well be a perfect fit with other programmes of work either already underway or planned within the system. This is why we need the county to self-organise and come together to get involved with this.

This work needs executive sponsorship from a few senior leaders who have a vested interest in driving this agenda for Essex and we need all organisations to come together to test and then deliver some of these interventions. We won't find the right solutions and impacts first time every time, so we need to get on to see what works best, get it embedded and help it become sustainable.

Yes, it's a massively aspirant ambition, but we think being bold and ambitious will in itself grow our confidence. Join us.

Speak to us

Want to get involved? We'd love to hear from you.

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5. Thanks

This work was possible thanks to a wide and enthusiastic partnership. Thank you to:

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- Rebecca Cole, formerly of Essex County Council and now at UK Sport, for programme managing Digital Boomers, but also for going the extra mile in connecting us in to the right people



APPENDIX

1. ARU Academic Literature Review



Digital Activation of the Elderly: Global insights to plan for independent living in Essex

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1. Introduction

In the current climate of an aging population, there is a greater and greater demand on social and health systems to support those who are increasingly frail and in need. This is a global phenomenon, and the need to continue to provide appropriate support and care to this vulnerable group is growing.

It was in 2001 that the World Health Organisation recognised the importance of promoting health at all ages of life, and now the health, quality of life and inclusion of this group are goals of key policy drives both within the UK and internationally. It is widely acknowledged that advances in digital technologies can have a vital role in supporting older people to with these goals, and particularly to support them to remain independent and continuing to live in their own homes (Soar 2007).

The older, more frail members of society, who may have the most to benefit from these technologies, are also those least likely to be comfortable with them, or the least prepared to use them. This group is also the least likely to have in place the infrastructure needed to support their deployment, in terms of digitally connected homes. So a key challenge of turning to technology as a useful tool for this group is the need to promote their awareness, ability and trust in these new technologies. Prior to the 1990s, there was a strong belief that the older population was unable to adopt new behaviours that improve their health (Golinowska 2016). Although evidence has since been generated to disprove this general statement, the steep and ever-growing learning curve required to operate new smart ICT (Information and Communication Technology) can create significant challenges for even the more able and digitally aware members of society. Hence a key challenge is how to produce technology that older people are able to and want to use.

In order to better understand the factors that are important to realising the benefits from the use of smart technology, and how it can be successfully deployed across the county of Essex in the UK, Essex County Council commissioned RETHINK Partners to study and understand how these technologies can be better used to promote independent living. This work is being carried out in two phases. Phase 1 is exploring existing literature and previous published work, both nationally and globally, to inform the active research phase (Phase 2), which will practically explore the support elderly and frail people receive across Essex, to track and evaluate how they use technology to help them in their daily living. Ideally they will establish a number of test bed homes, and then consider how what is learned from them can be made available to the frailer and older community across the county.

In order to give this exploratory work a robust foundation, RETHINK has commissioned Anglia Ruskin University to identify factors associated with digital activation of the elderly, which ultimately will inform the remaining Phase 1 activities (1. To develop a theory of change model to capture the transition from the current



state to the desired state, and 2. To co-design and prioritise a series of tests / experiments to learn how to address some of the issues identified in the theory of change). Awareness and understanding of these factors will allow the collaboration to begin to identify why technology is not being used more extensively by elderly people in Essex to support their independent living.

a. Objective of this review

To produce a literature review of factors associated with digital activation of the elderly sufficiently comprehensive in scope for the major factors to emerge, and sufficiently comprehensive in depth for distinctions between individual-level and population-level, and UK and international factors to be identified.

b. Scope of this review

The central question guiding this review is what are the factors associated with adoption of digital technologies by the elderly. Indirect impact of use by the elderly resulting from use by other stakeholders is in scope, but any other use by these other stakeholders (e.g. by care providers to improve their own quality or efficiency of service) is not.

The adoption of digital technologies can be framed as an example of general change process. It was therefore deemed in scope to include insights generated from research into adoption by the elderly of other types of technology (e.g. walking aids - assistive), and even of non-technological products (e.g. healthy foods - nutrition) and process changes (e.g. increased physical activity - active aging).

2. Methodology

The search strategy was designed to select all relevant literature, published and unpublished, and was made up of the following stages:

1. An initial, limited search of EBSCO and Proquest identified relevant terms from the sources title, abstract and keywords.
2. The terms identified in stage 1 and their synonyms were used for a more extensive search of the literature.
3. References and bibliographies from stage 2 results were also searched.

The initial search terms for stage 1 were 'Elderly', 'Digital', 'Technology', 'Independent living', 'Health promotion' and based on these, the search strings that were run were:

String 1: "elderly or older or senior or frail or vulnerable,"



String 2 “digital or smart or ICT, or technology”

String 3 “Independent or living or health or promotion or activation or activated”

There was no time or geographical limits imposed on when articles were published, however, they must have been written in English. Searches were carried out of the following databases:

- EBSCO (host)
- PsychINFO (EBSCO)
- PsychARTICLES (EBSCO)
- CINAHL Plus with fulltext (EBSCO)
- Proquest Central
- ABI/Inform (Proquest Central)
- Sociology Database (Proquest Central)
- ASSIA
- SocINDEX
- Web of Science
- Scopus
- ARU Library
- Google Scholar
- OAlster (grey literature)

Although the authors consulted the following existing systematic or structured UK charity review to identify factors to include in this review, they opted to conduct *de novo* searches of the literature. This was felt to be particularly necessary because the Age UK review focuses exclusively on UK research, whereas a major aim of this review is to highlight and compare against the international perspective. The reader is therefore advised to consult the Age UK review in addition to this review. Interestingly, no overlap was found between the references of this review and those of the UK charity review, indicating that the international literature is not usually consulted by UK stakeholders.

Age UK report:

https://www.ageuk.org.uk/globalassets/age-uk/documents/reports-and-publications/reports-and-briefings/active-communities/rb_sept13_age_uk_digital_inclusion_evidence_review.pdf



3. Factors associated with adoption of digital technologies by the elderly

To date, most published literature in the area of care of the elderly is focused on how the use of ICT can provide improved healthcare services to older people. There are relatively fewer articles that look at the use and adoption of ICT by old people themselves. This review draws on research from the technologically developed world including North America, Western Europe, including the UK, Israel, Australia, China and Japan. Overall, findings highlight the main factors associated with encouraging elderly people to adopt and benefit from new digital technologies, as well as what can be done to ensure that technological solutions are fit for purpose.

a. Education and ICT skills

Levels of education and digital competency have been found to influence the older person's decision to engage with technology (Broadbent 2012). Different studies found that better education was linked to the use of ICT routinely, whereas those with a lower education level (Parker 2013) or low health literacy (Kim 2009) were less likely to engage with it. Czaja (2006) found particularly high levels of computer anxiety amongst older women.

Williams-Zahir (2015) explains that older people are becoming overwhelmed with the pace of technological development. However, he suggests that this is fuelling their growing appetite to learn more about technology and how to use it. He appeals to society to show patience and support in helping elderly people to achieve this.

This ties in well with the finding of van Deursen (2014) that the age-based digital divide is beginning to disappear as the younger-old become the old, and as the elderly increase their internet activity levels. They find that the digital divide is beginning to more strongly reflect socioeconomic inequalities.

Czaja explains the importance of considering the experience that older people have with technology when preparing training programs specifically for them. As well as IT literacy skills, training should focus on reducing computer or performance anxiety, and be provided in a relaxed supportive environment. It was found that a self-pacing learning approach was most beneficial to increasing ICT skills amongst older adults (Czaja 2006). Friemel (2016) found that elderly people preferred to receive training in IT skills in private settings, rather than on professional courses.

b. Chronic health conditions and age-related decline

Given the nature of this demographic group, it is not surprising that studies have found that for older people, some of the age-related conditions, such as chronic illnesses, chronic pain, and cognitive or physical decline, have an important effect on the older person's use of ICT. It is interesting to note that the motivation behind the



development of a number of digital technologies now enjoyed by the masses was originally to address the communication needs of people with chronic health conditions and age-related decline, e.g. the first vibrating devices that later developed into pagers and vibrating mobile phones were originally designed for the hard of hearing, and speech recognition and speech output systems commonplace on smartphones today were originally developed for those with sight loss (Law 2006). Despite the ability of technology to act as the “great equalizer” for these patient groups, Hadder reports their uptake of specialised technologies as “rare”. Low motivation to engage with technology appears to extend to chronic health and age-related decline generally, as Hadder also report an inverse relationship between levels of mobility and use of digital technologies. They argue that there are a multitude of reasons for this, including that much technology is not accessible or suited for use by these populations. For example, older people with poor vision found it difficult to look at the display screen when attempting to use health related ICT (Lober 2006). Parker et al (2013) stress that physical or cognitive limitations need to be given extra consideration during the design phase of ICT. Research by Demiris in 2013 called for designers and developers to include older people at the design stage of ICT, so as to understand their specific needs.

c. Older people’s perceived need for technology

In a study by Heart (2013) conducted on people aged 60+ (mean age 80.2 years) recruited from US and Israel residential and nursing homes, it was found that some elderly people do not believe that ICT can help them, neither at present, nor in the future: 62% of participants could not see any need for ICT, and had no interest in engaging with it, whereas only 23% of them saw using ICT as being too difficult for them, or they saw themselves as too old to learn. Often a lack of familiarity with a new technology contributed to the view that it would only make things more complicated (Walsh 2011).

d. Social Isolation

A large number of older people feel socially isolated and often the relationship they have with their carers is very important to them (Loh 2009). This human connection and contact is vital to them and many worry that if they start using digital technology, it will replace the need for care givers and they will lose that personal human contact, which will lead to them feeling (more) lonely and socially isolated (Kang 2010). Work by Walsh in 2011 found that older people preferred human carers and care delivery rather than a technological solution, even when the technology was found to be more reliable, i.e. for remote monitoring of falls. This study (Walsh 2011) highlighted just how important social contact and feeling part of a community is to elderly people and their daily routines, and that the majority do not feel that technology can replace this human contact. Interestingly, Hutto report mixed evidence in the literature for technology impacting on social isolation and quality of life in the elderly. They



indicate that the major driver for elderly people using social networks is to stay connected with family, rather than to friends or persons they did not previously know, explaining why their social networks are significantly smaller than those of younger generations.

e. Technological stigma

Often technology can have an element of stigmatisation associated with it. Some older people feel that it can be a source of embarrassment, and that it singles them out as someone who is in need of help, which some of them are not ready to accept. When using ICT or remote monitoring technologies such as fall detection systems, panic alert pendants or other wearable devices, older people felt embarrassed, for fear of being labelled as having special needs (Steel 2006). Steel also found that overall their view of wearable sensors was positive, and their preference was for technologies that had sensors embedded into clothing or accessories such as a watch or a ring, in order to disguise the fact that they were using it. Another study by Steel (2009) found that the principal concern for older people with these types of wearable technology was actually forgetting to wear the sensor.

f. Technology design and functionality

Older people often prefer to use devices that are similar to others they are already familiar with, such as a television remote or radio controls (Caine 2011). Hence devices that have large easily readable text, a loud and clear sound, large buttons and are relatively simple and easy to learn to use would make ICT much more user-friendly for older people (Chen 2013). Older people also found that a touch pad, or touch screen interface made it easier for them to use a computer (Demiris 2013). Work by Steele found that older people wanted to be able to control the devices they were using, i.e. to have a screen or other interface that enabled them to get a feel for the mechanisms behind the functions and to adjust settings (Steel 2009). In one example given, they wanted monitoring devices that they were able to activate, rather than have the system do this for them automatically (Caine 2011).

g. Reliability and trust

Research has reported that older people were mistrustful of ICT, and that they also thought it to be unreliable (Lee 2014). In work describing a falls detection system, Demiris et al (2013) reported that participants were concerned that a fall detection system was not accurate, and even the staff and participants reported on a series of false alarms from the falls detection sensor that was in the older person's room. In another study by Steele (2006), older users were concerned about the battery life of the technology being limited, and reported that as well as the batteries needing to be



changed frequently, the design of the equipment was not well adapted to older more frail hands. Some reported it was very difficult, and even painful to change the battery. There were also concerns about whether the wireless sensor network would inform the user in the event of battery discharge, or other malfunction.

h. Ease of use

Ease of use, or even the perceived ease of use, was reported as having a significant impact on whether older people were willing to engage with a technology (Walsh 2011, Rashidi 2013). Other work reported that many of the systems that are in place are not really easy for older or frailer people to use. It was reported, for instance, that it was unclear how to operate telehealth systems, and that professional healthcare staff were often needed to help participants have access to and understand the data being produced (Hovey 2011).

i. Cost

A key challenge to the adoption of ICT support systems for older people is making them affordable for the older person (Parker 2013); often, older people, who are retired or not financially active, have less disposable income, and cannot afford expensive technical equipment to support them. Many older people are concerned about the costs of buying the technology, installing it and maintaining it (Steele 2006), and this appears to include elderly people in the UK (Age Concern). van Deursen report that multiple studies have found the costs of internet connection as being particularly off-putting, and this also appears to be true in the UK (Independent Age). Sometimes, it can be hard to see the cost-savings that these types of technologies can bring, and potential savings in the future can be hard to envision in the short term. This can make these solutions seem less appealing to older people (Reder 2010). However, work by Heart (2013) conducted in Israel and the USA, reported that only a small percentage of those included in their study (10% of a sample of 123) thought that computers were too expensive, and that that would be a barrier to adopting ICT to support their healthcare needs.

j. Confidentiality, privacy and security

Some published studies have reported that issues of privacy and data security are concerns associated with adoption of telecare solutions by older people. Demiris et al's (2013) work on video surveillance systems for home monitoring of older people showed that, while older people agreed to use the video monitoring as part of a falls detection system, they felt it was a breach of their privacy, and asked that the system be 'tuned-down' to only detect out-of-focus images, or movement of the individuals. To address concerns over data being intercepted by third parties, one study found



that the use of non-invasive biometrics was an acceptable method of identification for authorized users (Rashidi 2013). Overall, research has shown that older people were willing to accept the technology, even with their concerns regarding privacy and security, if they perceived it was useful, and something that they could benefit from (Courtney 2008, Alexander 2011). Overall findings showed that older people wanted, primarily, to remain independent and live safely, and that they were willing to compromise on privacy concerns, if they thought the technology could help them do this (Essen 2008).

k. Influence of other stakeholders

Chen (2013) found that older people were likely to be influenced by the opinions towards technology of family, friends and care providers, and that if these trusted individuals praised a piece of technology, the older person would feel more encouraged to engage with it. Other older people only started to use the technology if it were obtained for them by their children, who were concerned for their safety and wellbeing (Robinson 2013).

From a healthcare provider management perspective, some work reported that senior management were responsible for delivering new ICT and promoting adoption by older people, but that the staff who would be involved in the initial design and set up were not involved until later on (Essen 2008, Postema 2012). Several studies called for active engagement of all stakeholders (patients, carers, social workers and organisational management at all stages of design and adoption to ensure smooth and successful implementation and diffusion into practice (Robben 2012, Herbert 2004, Stolee 2010, Essen 2008).

l. Infrastructure

From an infrastructural perspective, lack of ICT integration was seen as a barrier to ICT innovation and diffusion in this sector (Alexander 2009). Numerous factors contributed to the poor integration between the different systems, including out-of-date hardware and software, network and Internet connection issues and poor interoperability between the systems in use (Hovey 2011, Stolee 2010).

4. Key Messages

Involving older people early on in the technology design process is vital to establishing a product that they will be able to relate to, and more willing to use.

A holistic approach must be taken, empowering older people to adopt ICT that has been co-designed by that demographic, and motivating developers and designers to engage with older people at the earliest stages of development.



Whilst not technical solutions, pre-emptive strategies such as active aging can help to keep people healthier and living independently longer. In Japan, plans are in place to encourage the young-old to continue to be a part of the workforce, for as long as they are able to actively engage and contribute to work. A knock-on effect of this will naturally be greater exposure to digital technologies, and therefore greater digital literacy.

Often the social groups that most need and would most benefit from technologies are those least able to afford and engage with it. In this respect, the challenge is to engage with this sub-group on a social-societal level to ensure they have the skills and the awareness in place to benefit from well designed and elder friendly technology.

Lack of genuine inclusion of older people at the design and implementation phase means that user needs retrofitted onto existing solutions, rather than being part an integral part of the system (Loader 2008).

5. International highlights

A systematic review of mostly European assisted living digital technologies by Calrasari in 2017 concluded that there is a lack of evidence regarding just how useable, effective or efficient the technologies that are being designed actually are. Overall they believe that there is a clear requirement to better understand the relationship between what the end-user actually needs and the solutions that are being produced. The lack of user inclusion in the design and development of the assisted living technologies that are being proposed is one that needs addressing, if the solutions are to realise their potential for supporting independent living of older people. They conclude that technology being produced to help older people remain independent would be more effective if it were designed more inclusively, and with greater attention to the user's needs and goals rather than the current focus of maximising technological potential and technical performance. This finding was corroborated by the systematic review conclusions of Magnussen at (2005) that there are almost no studies across Europe that explore co-design of solutions with the older frail person and their family carers.

Living labs are an effective vehicle for supporting end-user codesign of technologies. Although the concept has struggled to be sustainable in the UK, there are notable examples of successful living labs across Europe and with particular interest in technologies for the elderly, including:

Licalab in Belgium: <https://www.licalab.be/en>

Zeeland Living Room in the Netherlands: <http://www.biz4age.eu/node/4>

Smart Homes in the Netherlands: <http://www.smart-homes.nl/default.aspx?lang=en-US>

Care libraries in the Netherlands: <https://www.huis-van-morgen.nl/>



Improvements in medicine, hygiene, and nutrition have led to Japan ageing at an unprecedented rate (more than twice as much as in countries such as France (Arai 2012): 12% of the Japanese population are 75 years and over, and the numbers of people who are frail and in need of health and social care is rising. It is recognised that Japan has turned to technology to support its aging population, and that it is a world leader in terms of technologies designed to support independent living of this population. However, it has also been recognised that while technology can help support independent living, there is a need for societal change, to promote social inclusion and contribution of the elderly, as well as active ageing initiatives that can lead to a healthier older population less in need of care and able to remain independent for longer.

The ease with which elderly people can access technologies should also be considered. It could pay dividends for public providers and commissioners of health and care services to make it as easy as possible for an elderly person or their friends or family to privately purchase a technology that ultimately delivers cost-savings to the system as well as to them personally. A good source of information related to the ways in which elderly people in Belgium, France, the Netherlands and the UK can access innovations is presented in the Route to Market Tool created by the EU project Silver Economy Accelerating Strategies (SEAS)2Grow project, albeit from the perspective of a supplier of these innovations: <https://www.seas2grow.com/route-to-market-tool/>.

6. Conclusions

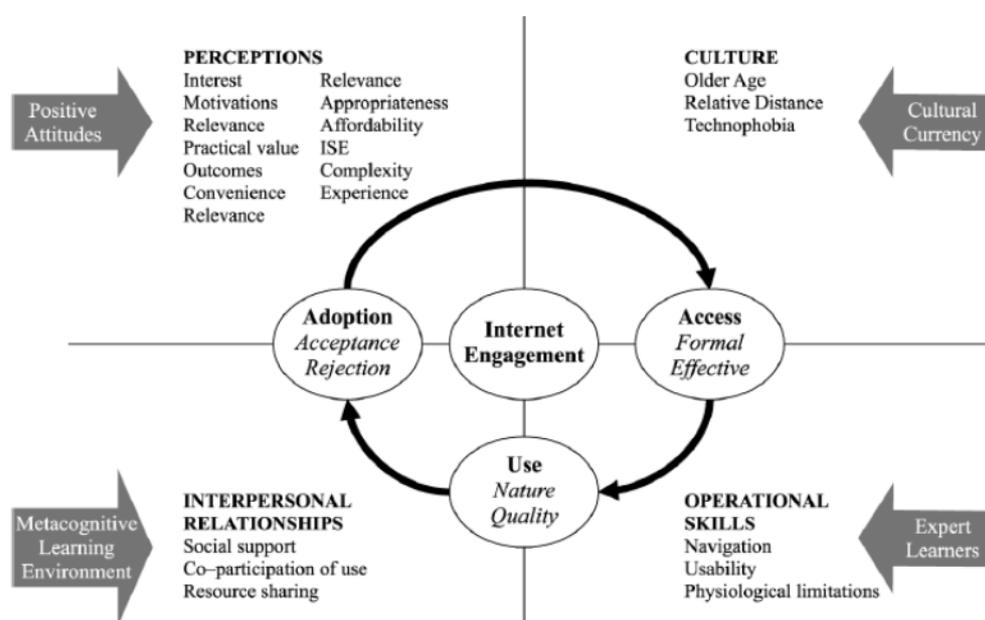
Health promotion among the elderly continues to be a challenge, even when not considering technology or ICT solutions (Golinowska 2016), and the elderly have long been neglected in terms of health promotions initiatives globally. While this has changed, more of the current initiatives are still focused on the under 85s. At present, strategies have three basic aims: maintaining and increasing functional capacity, maintaining and improving self-care, and stimulating social networks. The goal of these strategies is to contribute to a longer, more independent quality of life, and as such, the promotion of digital technology to achieve these same goals must overcome the present limitations of the wider field (Aceros 2015). Overall these programs are implemented by primary healthcare organisations, they tend to be nurse led, or else by volunteer organisations or NGOs and public authorities. All these organisations share a lack of sustainable sources of funding, and so struggle to drive forward long-term programs that can ensure enduring change (Greenhalgh 2015).

The findings presented in this review, based on current international academic and grey literature, should be considered in terms of the development of a regional strategy to realise the potential benefits that technology can have to support older



people, and allow them to live independently. In the case of Essex, there is an opportunity to explore the promotion of integrated ICT solutions, looking at the design and development phases, and considering adoption as the main driver. This will mean considering a host of factors, including usability, attitudes, experience of use, support, perceived benefits, and inclusion for the older person, as summarised in **Figure 1**. The setting up of test environments could be an ideal opportunity to bring together older people and designers of smart technologies, so that the end user views can be understood early on in design process in a home environment.

Figure 1 What needs to be in place for digital activation of the elderly (Hill et al, 2008)



7. Summary

For the most part, smart assistive living technologies have, so far, underperformed their potential, with low uptake, high abandonment, and numerous challenges (monetary, operational, technical, social, ethical, clinical, etc.) hampering their introduction into mainstream health and social care systems. Indeed, this lack of success has been referred to as a 'case study for non-adoption of technological innovations' (Greenhalgh 2016). Attempts to understand best practice and strategies for roll-out of these assistive technologies have, to date, fallen into 3 broad approaches:

1. Technical design (largely lead by computer science and engineering, and performed well under lab conditions)



2. Evaluations performed from a clinical perspective (Randomised Controlled Trials, where the focus is on comparing technology plus standard care vs standard care alone)

3. A more person-centred approach, where the emphasis is on participant experience, led by social scientists who carry out small-scale qualitative studies to explore issues associated with the technology.

Overall, these approaches have so far failed to really address the problem that neither the technological solutions, nor the people who they are designed for, can be understood in isolation from the complex socio-technical systems that they create. For these reasons, Greenhalgh (2016) and others have called for a new paradigm. They reinforce that in order to achieve assistive technology that matches the needs of the users, the focus should be interdisciplinary (incorporating other perspectives such as management and political science, and bioethics), and it should employ a recursive dynamic between design of the technology and incorporation of the needs of the user and their ecosystem.

Greenhalgh's work (2016) suggests that to be successful, new assistive living technology, must move the debate away from scaling up 'one size fits all technological solutions', towards interdisciplinary co-creation, stakeholder inclusion and holistic systems thinking. This is challenging as it requires a shift in the mind-set of those producing the technology. In the UK the current business model is centred on large contracts that supply and maintain a single solution, which does not fit with the goal of inclusion, diversity and co-creation, and therefore inconsistent with the move towards personal health and care budgets. Hence, they hypothesise that the creation of successful technologies may require a move away from large contracts and towards smaller contracts of more customisable solutions. Key challenges for the health and social care sectors are how can they develop procurement and service delivery models that can enable this transformation. In terms of policy challenges, a means of providing an overall strategic direction, which encourages local adaptation, will need to be found. These ideas will need to be put to the test in real-world settings and findings from them can guide feasibility for industry, for health and social care service and for policy makers, as to how best give the user what they want and what they need.



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APPENDIX

2. RETHINK and HealthWatch Essex Insight Report



RETHINK and HealthWatch Essex Insight Report



DIGITAL BOOMERS

Insight Report

How can technology be better used across Essex to promote independent living?

Introduction

It's a given that assistive technology can help people live independently for longer in their own homes and should have a beneficial impact both on the quality of life for people and their carers and delay, or reduce the need for social care and health services. However, deployment of this technology at scale beyond the use of relatively simple, low cost products such as monitored alarms, has not yet taken place. A group of leaders in Essex came together to ask how we can remove barriers to this and test and build new strategies to help local people harness technology, not for technology's sake, but in a way that invests in the people of Essex's digital skills today, for better outcomes tomorrow.

The first part of this journey was to gather insight about how older people are currently using technology – any technology – as part of their daily lives. Essex County Council commissioned RETHINK Partners to lead this work and it was delivered as a collaborative, combining the interdependent, needs, insight and aspirations of others in the Essex system, including: Essex Fire Service, NHS representatives, District Council leads with a housing and / or assistive tech role, voluntary sector leads, Healthwatch Essex and ECL. Healthwatch Essex (HWE Insights) partnered with us on the insight gathering.



How we kept the insight gathering human

We took a blended approach to acquiring insight. It was an exercise in observing, listening and engaging. Conventional research methods helped us explore existing data around how technology is being used by older people for wellbeing. We suspected there would be social, economic, generational and familial influencers. We wanted to understand these things, but look beyond them to the broader environmental causes.

Who What Where When Why?

- we found our fellow explorers: the partners in the collaborative opened up their networks which enabled a world of people willing to speak to us
- we were able to talk and listen, chat and observe to understand where older people in Essex spend their time; where they get their information; who they speak to; who they trust and who has power and influence – both in how an individual acquires technology and in how they use it
- the more people we spoke to, the more doors it opened. People invited us, along with partners, into to their homes and had lots to say about technology and the role it plays in their lives. These invitations provided an immense window of opportunity to understand people's lives: who they see; what their week or month looks like; what their motivation triggers are and what their disincentives are

Methodology

We constructed a simple framework to speak to the people of Essex centred around 5 core questions:

1. what do you understand by technology?
2. what technology do you use and what for?
3. what puts you off using technology?
4. who would you trust to give you technology?
5. is there anything else you would like to add?



These were the entry point for the light touch conversations; the interviews and focus groups flowed from this starting point too. We spoke to people in various guises: professionals; residents; carers; patients and volunteers. We aimed to undertake the following:

1. 100 x light touch conversations

- in a range of locations/districts
- in a variety of meeting places

2. 10 x In-depth interviews with citizens

- in a range of locations
- with a variety of public and professionals
- tapping in to the power of influencers

3. 3 x discussion groups

- in a range of locations
- with a variety of public and professionals

Target groups:

- age range from pre-retirement upwards – no upper limit
- professionals
- carers, loved ones, people who had touchpoints either by design or by coincidence in an older person's life
- variety of socio-economic influencers
- people who have never used tech
- those who are comfortable with it
- a blend of people in receipt of health, care and voluntary services and those without community services which are often the mainstay for more vulnerable older people

What did we aim to get insights into?

We spoke to people very broadly about tech: what technology meant to them; what tech they used and what for; what were the barriers to using technology and who or where they trusted to give them technology. Virtually everyone we spoke to went beyond this to help us build a holistic



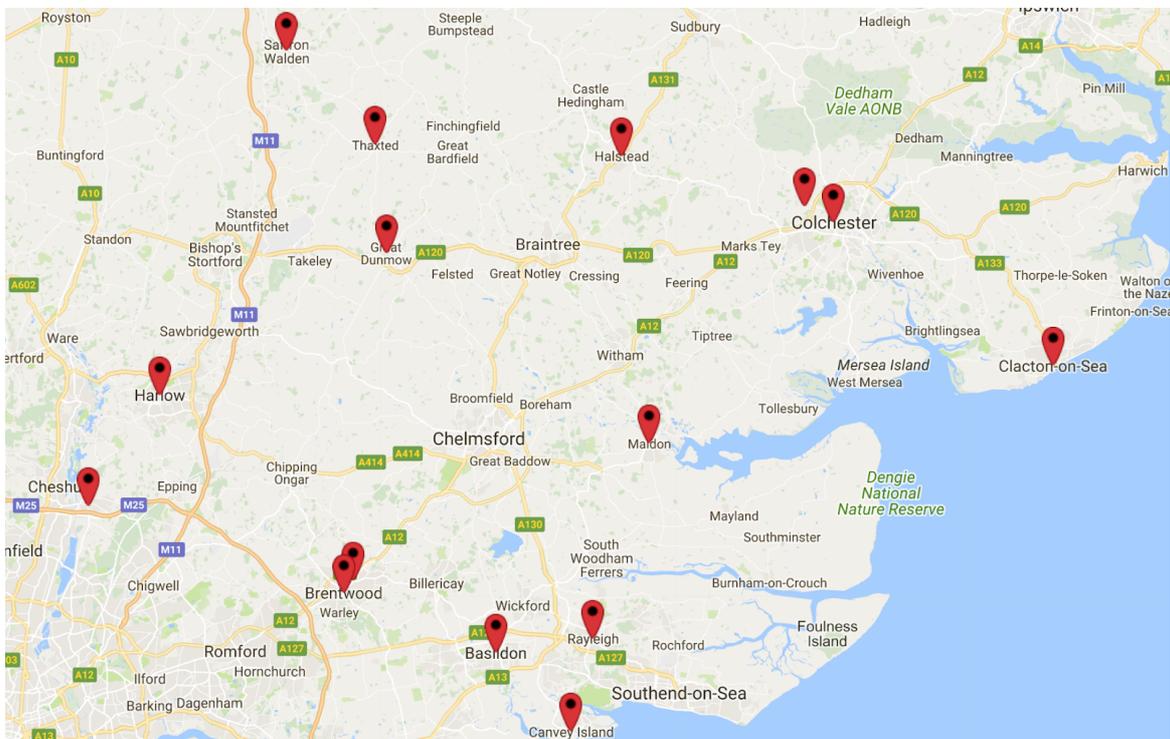
picture of: how local people and professionals genuinely felt about tech; what was working well for people; where the opportunities and motivations were for getting more comfortable with tech.

Where did we go and who did we speak to?

We exceeded our initial targets across 24 towns in Essex:

Target contacts	Actual contacts
100 x light touch conversations	160
10 x In-depth interviews	21
3 x discussion groups	10

We travelled all over Essex, visiting: Saffron Walden; Thaxted; Dunmow; Harlow; Waltham Abbey; Brentwood, Shenfield; Basildon; Rayleigh; Canvey Island; Clacton-on-Sea; Maldon; Colchester; Halstead and West Bergholt. While we were at those locations, we also spoke to people from: Danbury; South Woodham Ferrers; Burnham-on-Crouch; Wickford; Billericay; Chelmsford; Loughton; Theydon Bois; Hockley and Wakes Colne.





In addition to speaking to people in their homes, we were greatly supported by the verve and contributions of our partners in accessing their stakeholders:

- Action For Family Carers – customers & staff
- ECL – customers & staff
- Essex County Council TEC Team
- Alzheimer’s Society Cafe
- Community Sheds West Essex
- Community 360 Winter Warmers
- Uttlesford Council residents & wardens
- EPUT staff
- A GP
- NHS Staff, patients and visitors at a chronic conditions clinic and hospital
- Essex Fire Service – staff
- Occupational therapists
- Social care workers

Here is a small selection of some of the people we are so grateful to have met:





Our Findings

We had different themes that emerged with each day of our insight gathering. However, those themes built on one another and there was one consistent thread that connected all of the insights. Most people underestimate how intrinsic tech is to older people's lives in Essex, whether they are an older person themselves, a professional or a family member. However, there is a confidence issue in articulating their fairly widespread use of tech, as well as a confidence issue in finding new tech themselves.





What tech are people using, what for and how did they get it?

The vast majority of the people we spoke to were using all the main social media channels, especially Facebook, but also Instagram and even Snapchat. Skype and FaceTime were well used and as far as devices go, they were mostly using laptops, computers, tablets and smartphones. Nobody we spoke to was using Apps, telehealth or assistive technology beyond basic call alarms or pendants.



There was very little awareness of assistive technology and how it can help with daily living tasks – even amongst those who had needs or were performing a caring role for a loved one.



However, some of the customers we met in the ECL Wellbeing Hubs had falls pendants. People told us they were using the following products or activities online: Alexa; Kindle; Laptop; Smartphones; iPad; PC; careline; booking holidays; shopping; online banking; WhatsApp; Trip Advisor; news; Apple Notes app for recipes and lists; Sky; Netflix; Facebook; FaceTime; Photoshop; Snapchat; online games including scrabble; Tynetech pendant with speech module; local history; horse racing and motor sport.



They trust their family members to advise them on new tech, but many would appreciate more time in being shown how to use tech thoroughly. There was an absence of recommendations from health and care professionals.

Many feel more confident when having instructions written down.

We also noticed the power of conversations in action; many of the people or groups we spoke to had never really had a conversation about technology before. Their interest was piqued, they started to exchange tips or advice, they wanted to outdo each other. Simply introducing the topic started to help people think differently about technology and its potential.



Tech is pervasive

Tech is a part of daily life for most of our older people in Essex. Our top insights are as follows, told from their perspective:

1. we are more tech savvy than we realise
2. we all underestimate how tech savvy we are
3. we trust our peers
4. we are happy to learn from grandchildren



5. we trust professionals – to a point
6. we want to have fun
7. we don't want to be targeted as old people
8. we want to connect with our loved ones
9. some of us have a competitive streak
10. not every community has a 'Nigel'
11. we like tablets (especially iPads)
12. we don't feel we are doing it 'right', but nobody does!





1. we are more tech savvy than we realise

Almost all the groups we spoke to initially claimed that they were not tech savvy, but - with the exception of those with a high social or care need - within a few minutes of discussion it almost always resulted in them revealing a high use of tech, and often a lot of confidence. They are using a range of devices and like to cherry pick what and how they use, dependent on their need and moods. Most people feel that they “get by” using tech, but acknowledge that it is an important part of their daily lives, whether it’s using Satnav in their cars, or connecting with friends and family on Facebook. One carer, who’s partner has dementia told us that “my world is getting smaller and smaller every day. The internet is a lifeline for me.”

2. we all underestimate

As family members, and sometimes as professionals we don’t always see how curious and capable older people are around tech. There may be a perceived anticipation of difficulties that leads to assumptions. When it comes to family dynamics, it is complex as it can be tied up in existing relationship dynamics and dependent on how much time, as well as the quality of time available to spend with loved ones, clients and patients.

3. we trust our peers

Older people thrive on their peer to peer connections. They are more likely to trust the opinion and experiences of a peer than a tech salesman. They are interested in recommendations and advice from people in similar situations to them. Nobody that we spoke to felt they had been recommended tech from a health and care professional. The only recommendation of tech that anyone could refer to was a carer who had received information from another carer whilst attending an Alzheimer’s Society Dementia Café. One lady we spoke to is a keen ebayer. Her co-focus groupers knew her and were surprised at first, but keen to learn more about what she was ebaying and why. She told us that she had actually run a one-off course for other retired people to share her skills. It was well attended and provides a good insight into finding hooks to develop people’s tech skills. She observed that where it failed to be sustainable was that it was a one off, and people needed follow-up support.

4. we are happy to learn from grandchildren

Family dynamics can be complex. Some of the older people we spoke to were occasionally suspicious of family members “pushing” tech on them, incase it was an attempt to replace face to



face contact with virtual contact. However, they enjoyed learning from the younger generation. It would seem that there is an opportunity for intergenerational exchange that can be more beneficial than parent to children exchanges. As one focus group member put it “sometimes you can get on better with the grandkids than the kids.”

5. we trust professionals – to a point

Everyone said they would trust their health and care professional to recommend tech. Health professionals felt as though they didn't have the framework to make recommendations or prescribe tech and some care professionals felt there was potentially some suspicion from customers toward them in recommending tech. It is possible that this is borne out of fear that digital care might replace hands on care. Again, social care workers explained that often families would be concerned about this.

6. we want to have fun

Everyone was using their devices, software, platforms, apps and websites to manage their lives, such as doing research, booking holidays and often- but not always – doing online banking. However they enjoyed playing games, participating in hobbies and connecting with friends and families. One lady told us she has five online games on the go with various friends at any given time. Another had found her old boss, now 100 years old, online.

7. we don't want to be targeted as 'old people'

There was a suspicion around being marketed to as older people which raised questions around scamming and being upsold tech they didn't need. There is a lot of mistrust around scamming and online fraud, which had a direct correlation to people's confidence with online banking. Online banking appears to be the last bastion of digital discomfort, however there were varying degrees of confidence. Some of the people we spoke to used online banking to regularly check their balance, but still preferred to go into the branch to deal with bank staff in person when moving money around. There was a significant amount of people however, who applauded online banking and felt that it gave them much greater control to manage risks around fraud: “I can check my balance daily with online banking instead of waiting for a paper statement at the end of the month.” This was notable with people who had a caring role and had significant constrictions on their time. During the focus groups, it was notable that when those who shared their positive experiences of online banking, that their peers paid attention and noted.



8. we want to connect with our loved ones

Interacting with loved ones is very important and it made people open to trying different tech. People were using a wide range of devices and apps to stay connected including Skype, facetime, Whatsapp, Instagram and Snapchat. Video calling was predominantly used for keeping in touch with family and friends living far away, or for catching up with grandchildren whilst on holiday. We heard one story of a housebound widow who had outlived all but one of her friends. Her friend was also housebound. Her son set up both ladies on Skype so they now speak to each other several times a week.

Some people felt that texting and messaging apps posed a threat to the amount of time they could spend with their family. This was a cause of frustration for busy children: “Would be great if my mum could see tech and using text as an add on to our communication, rather than a substitute.”

Often however, people thought they were more resistant to communicating with family virtually, than they were in reality. One man we spoke to illustrated the perception tension beautifully. He was annoyed as his children and grandchildren texting him instead of phoning him: “The children text me. Hard cheese! You’ll have to call me eventually!”, he told us. However, later in our group discussion he expressed frustration at his own elderly mother’s reluctance to skype him from another part of the country where she lives. It would seem that older people in Essex like to cherry pick how they use technology to fit their wide-ranging needs. In this sense they are decidedly tech savvy and mature.

9. some of us have a competitive streak

Some children commented on the competitive nature of their parents and grandparents when using tech. Some people like to be pioneers and others often like to be fast-followers. Even where people didn’t see themselves as tech savvy there was always a curiosity about using more tech, once they listened to the experience, skills and often additional fun and freedoms of their peers. We saw this play out in focus groups and interviews.



10. not every community has a 'Nigel'⁸

Having an 'IT guy' or tech expert is a common factor amongst the people who were more digitally active. Often there was a family member or someone in their community who was the go to person for queries and advice. We heard great affection for one called Nigel. Having a 'Nigel' can be a positive stimulus and influence in these micro communities, but they are not standard and it became quite apparent when people did not have consistent support – and they would very much appreciate it from people just like them, in their own communities.

11. we like tablets (especially ipads)

Most people had a range of devices that they used for different tasks. There was a lot of love for tablets, for their speed and portability. However, a big plus appeared to be the simplicity with which tablets load. A big frustration with PCs and laptops was loading time, updates and passwords often being a barrier to use, but tablets eliminate that barrier. People often also enjoyed having their tablet on the sofa whilst watching TV, meaning that they could immediately research things that they had just caught their interest on TV. They enjoyed the immediacy of this, found it stimulating and rewarding to be able to quickly build knowledge on any subject matter of their choice.

There were a few people using Alexa and all had a positive experience. They enjoyed the practicality and fun and in some cases it provided some peace of mind for carers. EPUT is about to embark on a pilot in Essex, using Alexa with clients who have early stage dementia. We will be keen to follow this closely and learn from it. It would seem that 'tech breeds tech' and one of the ladies we spoke to who was using Alexa, now wants to invest in a robot vacuum.

12. we don't feel we are doing it 'right', but nobody does!

The vast majority of people felt they were "just getting by" with tech. There is a perception from those who "didn't grow up with computers" that they learn the bare minimum and use tech for what they need. Many of these people may well have been using tech for up to 30 years, both professionally and personally, but there remains an anxiety, lack of confidence, or underestimation of skills and abilities. One lady summed up how she felt when she retired: "When I retired I thought 'thank goodness that's not my responsibility anymore'. You lose confidence that

⁸ A 'Nigel' is the name we have given to the son or neighbour (we only heard of male ones) who is the go-to person in a community to resolve queries about tech.



you thought you had. Deep down you know you can, but you're frightened you can't." This appears to typify the majority of experiences of the older people we spoke to. However, arguably, most of society, regardless of age, feels the same. We didn't hear any concerns about connectivity in people's homes, but clearly there is an appetite for universal wifi to be available in public buildings and places of care.

Making Sense of it

The people we spoke to across Essex were many things via tech. They were gamers, bankers, quiz masters, historians, wheeler dealers; journalists; friends; carers and even an online troll. Very few were virtual patients, with limited access to health and care interactions.

We looked at why there was such a contradiction between perceived ability/ confidence and actual behavior – as well as differing perceptions, confidence and appetites across different groups of people.

We began to ask where might the opportunities be to hook people in to technology more confidently, building on the hobbies, keeping in touch with loved ones and learning new things to improve life, save money or simply entertain. We asked where the digitally excluded people may be. Asking, are there groups of people, albeit a small minority that don't have touchpoints with friends, family or services and how might we best reach those people?

There appears to be a combination of influencers:

1. Environmental – This could be demographical. Where people live, their financial situation, health, responsibilities, family connections, roles in a relationship, peer dynamics and whether they have a 'Nigel'
2. Current situation – This could be a short or medium-term influencer such as a bereavement, new health issues or caring responsibilities
3. Life experience/perception – We found that people's life experiences shape the lens through which they see themselves and their capabilities, but also how they view the world. Often people's world view means it provides a framework for reinforcement of their perceptions. In a marriage, the roles and responsibilities that shaped that partnership appear to define us as we grow older – so if one half of the couple was responsible for



say finances and gadgets, that tends to remain the case – even if that person has become ill or passed away, there may be a reluctance by the other partner to step into that role.

4. Personality – ultimately, personality appears to be an influencer. It determines levels of curiosity and appetites for experimentation and risk taking. It can also influence whether tech is initially viewed as a positive and enhancing addition to daily life or a potential negative influence.

Technology: Health, Care and Independent Living

Whilst the purpose of the insight gathering phase was to focus broadly on technology and how older people are using it, we did uncover some specific insights into the attitudes and use of technology for health, care and independent living – both from older people themselves, carers and from professionals who work with them.

We didn't find any examples that people could recall where tech had been recommended by a professional. Professionals broadly felt unconfident – about technology, about permissioning and keeping up with trends.

There were no obvious incentives of any kind for professionals to talk to people about technology as part of their care / self-care / independence and there were no resources for professional staff to assist them with this task. Technology is often left to a junior member of the team and an add-on. Our professional communities are not digital natives themselves, often due to time pressures. They were frustrated that they could see much potential for tech in the lives of the people they are working with, but felt there was a lack of support to prescribe things that had been officially endorsed. They felt that patients were further ahead than public services in this respect.

Advising and then 'on boarding' patients and clients with tech seems to be the key barrier to further confidence and adoption. Professionals told us citizens need more support in their lives to get comfortable and proficient using new technology for independence.



The final takeaways

When prompted, older people were generally very interested in knowing more – particularly those with a current health issue or caring for a loved one for example, with dementia or a health issue (an example of current situation acting as a motivator). However, there was a lack of a trusted source of information, knowing what tech would be appropriate for their needs. There were issues of trust and confidence coming into play, as in: who do I trust to advise me? Money appeared not to be a barrier if it would improve quality of life.

Older people are using technology much more than we – or they – realise, and they have an appetite for using it more. But we need to be thoughtful about building confidence, creating trusted sources of advice, making support readily available – ideally embedded in their social network or community. And we need to invest in the skills and confidence of our own professional workforce - possibly even create new roles to advise colleagues and support people at home to sustain their independence.

This insight – combined with the other outputs from phase 1 of this work provides a strong platform for the next stage which is to design a range of actions, interventions and experiments to stimulate greater take-up of technology for health, wellbeing and independence. This phase is about individual change and organisational change leading to social change. At its heart will be the Theory of Change model to help us track our way to a more technologically enabled future in Essex.

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