# Consumer Technology TEST of CHANGE November 2019 - November 2020

**Project Report** 







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The report has been created on Miro and can be accessed online, viewed as a PDF, or used as part of a toolkit. Supporting content in the form of templates, videos, webinars and workshops will follow.

To use this report please refer to the Chapter content page. The Chapters have been organized thematically around Citizens, Service Providers and Industry, and also include case studies and supporting resources, as well as questions on next steps.

Link to report here.

Service Providers may wish to adopt some of the content where it is relevant e.g. our approach, Principles, 'How to' guides.

The case studies are best viewed via links to the original Miro project boards, where their detailed content can be best explored.

There are live links to documents, products and other resources throughout this report.

# SUMMARY EXECUTIVE

Alzheimer Scotland have a track record of innovation that is trusted within the Scottish Digital Health and Care ecosystem. We put people at the centre of everything we do, collaborating with others to raise the bar and ensure the best possible outcomes for citizens. We were asked to lead on a Technology Enabled Care Programme, Consumer Technology Test of Change (ToC) in late 2018, and we have gone on to work with over 20 partners and 40 families to date.

ToC2 is the successor to ToC1 (2018-2019), which established:

- The feasibility of using off-the-shelf technology with people living with Long Term Conditions (LTCs);
- Key learning for implementation at scale;
- Initial assessment of suitable products.

As an outcome of ToC1 we have gone on to develop meetadam.co.uk as a tool to support citizens with LTCs to find the right technology at the right time. ToC2 built on stage 1 and focused on:

- · Longer term use case work with existing clients;
- · Increasing the number and range of use cases;
- · Preparing for large scale implementation.

The Coronavirus Pandemic led to some modification of the programme and deliverables.

- Time scales and number of clients were amended;
- Only those able to proceed with just remote support were included;
- A COVID Response micro project ('Mental Health Food Parcel') was included.

ToC2 gave us a deeper understanding of the conditions required to make technology interventions successful and this report is the distillation of that learning. We hope it will be used to support the adoption of consumer technology solutions by citizens and by Health and Social Care providers in Scotland.

### In doing this ToC we have found that there is a need for multiple discourses about benefits and risks, as different stakeholders have different perspectives. It is helpful to think of three key views: Citizens (families), Service Providers, Industry.

This report acknowledges these viewpoints and addresses each independently in sections titled; 'How we work with Citizens', 'Service Providers', 'Future Workforce', and 'Industry'.

### HOW WE SUPPORT CITIZENS

Our approach to working with people is founded in Human Rights and participation. Our \*Dementia Circle community is the heart of everything we do (\*Dementia Circle was set up 10 years ago, and is people with lived experience and family carers who find, test and share life hacks, and product and service solutions with the community). We have evolved this model to work with families on the ToC, developing principles to guide the work that could be readily adopted by others working in this field. We also define the conditions needed to get the consumer technology solution 'right' for each person, and the process that follows on from identifying individual needs and aspirations.

### SERVICE PROVIDERS

Currently access to consumer technology is not accommodated as standard within health and care services provided in Scotland. However preventative and proactive models of care are likely to include an element of consumer technology, whether linking to citizens own existing devices, or as part of a self management toolkit, or to support discharge and rehabilitation. Service Providers readiness to support this is somewhat uncertain and would benefit from national guidance. In this report we suggest service models that are in use by Alzheimer Scotland and partners currently, that are supported by the ADAM (About Digital And Me) resource meetadam.co.uk.

### **FUTURE WORKFORCE**

Finding people with the skills and competencies to support this work was a challenge for us in ToC1 and 2, and is an area that needs to be addressed if it is to be implemented at scale.

### INDUSTRY

Our experience of consumer technology for the use cases we have has led us to 'hack' devices to enable them to work for citizens. Bringing Industry closer to citizens with LTCs, would be beneficial and should be pursued.

### PLAYBOOK

Throughout ToC1 and 2 we have seen the need to develop tools to support delivery within this emerging area of care. What we are working towards are tools and methods to make it easier for the end user and the service provider. We have developed guidance on simple steps to take, as well as, 'set up' guides and 'how to' instructions, which have been used in the ToC, and continue to be updated and used by Alzheimer Scotland.

### KNOWLEDGE EXCHANGE

We refer to work by others in this field and the opportunities for knowledge exchange and synergistic collaboration. In both ToC1 and ToC2 reaching out to others has enabled us to overcome hurdles that would not otherwise be solved within our timeframe. How we approach and build relationships has always been a strength within our work.

### CASE STUDIES

Case studies are hugely impactful in telling the 'story' of the real life experience of technology in action. We know that they have utility for all our stakeholders: Citizens, Service Providers and Industry, and we have strived to capture as much as we can, to transfer this knowledge to others who may benefit. That said, it is challenging to represent the complexity and diversity of all of the cases. People, as we know, don't fit in the neat boxes that would make it easy for us to 'tell their story'. The technology solutions were also 'messy', having to be adapted and swapped around to get a good 'fit'. Our case studies are challenging to represent on A4 or a standard screen, but are native to Miro and can be view there for the optimum experience. We have 24 case studies from ToC2 and examples are given in the body of this report.

### COVID RESPONSE MICRO PROJECT

The impact of COVID-19 derailed our ToC2 activity as we had to support business continuity in Alzheimer Scotland services; supporting over 200 staff to access and use MS Teams, Near Me and GoTo platforms, and move from face-to-face to an exclusively online presence.

We were acutely aware of the isolation and anxiety people were experiencing and keen to find solutions that we could operationalise immediately. The answer came from the work we had been doing for some time with the Amazon Echo system, specifically the Echo Show. We were also keen to compare it with Google's Nest Hub Max, also screen based, and the new to the market Portal from FaceBook.

Our response was to look for ways to send these devices to vulnerable people, ready to use 'out of the box'. We did this in addition to supporting with the delivery and set up of 400 Chromebooks and iPads through Connecting Scotland. Again we were able to make some comparisons with the efficacy of these devices for the people we support. We also used the learning to contribute to TEC Programme discussions around the 'Bring Your Own Device' work being led by Falkirk Telecare.

### HOW WE MEASURE IMPACT - a novel tool We have been privileged to work closely with families, particularly during times when many have felt at their most vulnerable, and unable to have the reassurance

of physical contact with loved ones.

We have a sense of how families have benefitted from the technology solutions given, but we have been unable to find a formal method of measuring this. To help us understand we developed a novel tool, which we called the 'Coping Scale'. This simple tool has given us valuable insight and would benefit from further collaboration and prototyping with our Allied Health Professional partners and academia.

### LEARNING RESOURCES

Supporting the use of consumer technology has led us to create the resources that are included in this report. Empathy and understanding are foundational to getting the solution right for the citizen. There is also the need for technical expertise, and often, for the use cases we have, creating workarounds to enable the desired function.

A future version of the Consumer Technology Playbook would be a repository of this ever growing resource.

# ZEX WHAT

How do we scale the learning from the Consumer Technology Test of Change and support the use of fit for purpose, off-the-shelf technology among people living with long term health conditions, physical or learning disabilities and older people?



Is there a way to co-ordinate, strengthen and grow initiatives that support the use of consumer technology to achieve outcomes that are important to people, including people with self-directed support?

How can we optimise learning from organisations and services currently successfully supporting the use of consumer technology?

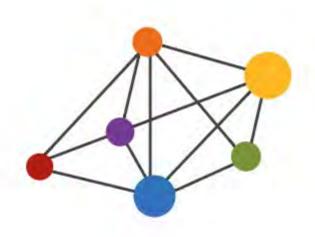
How do we facilitate partnerships between industry, citizens and people providing care and support, to design, test and adopt new technologies?

How are both service providers and citizens supported to make informed decisions about new to market technologies?

How do we achieve all of the above, while keeping the citizen at the centre, and ensuring choice and control?



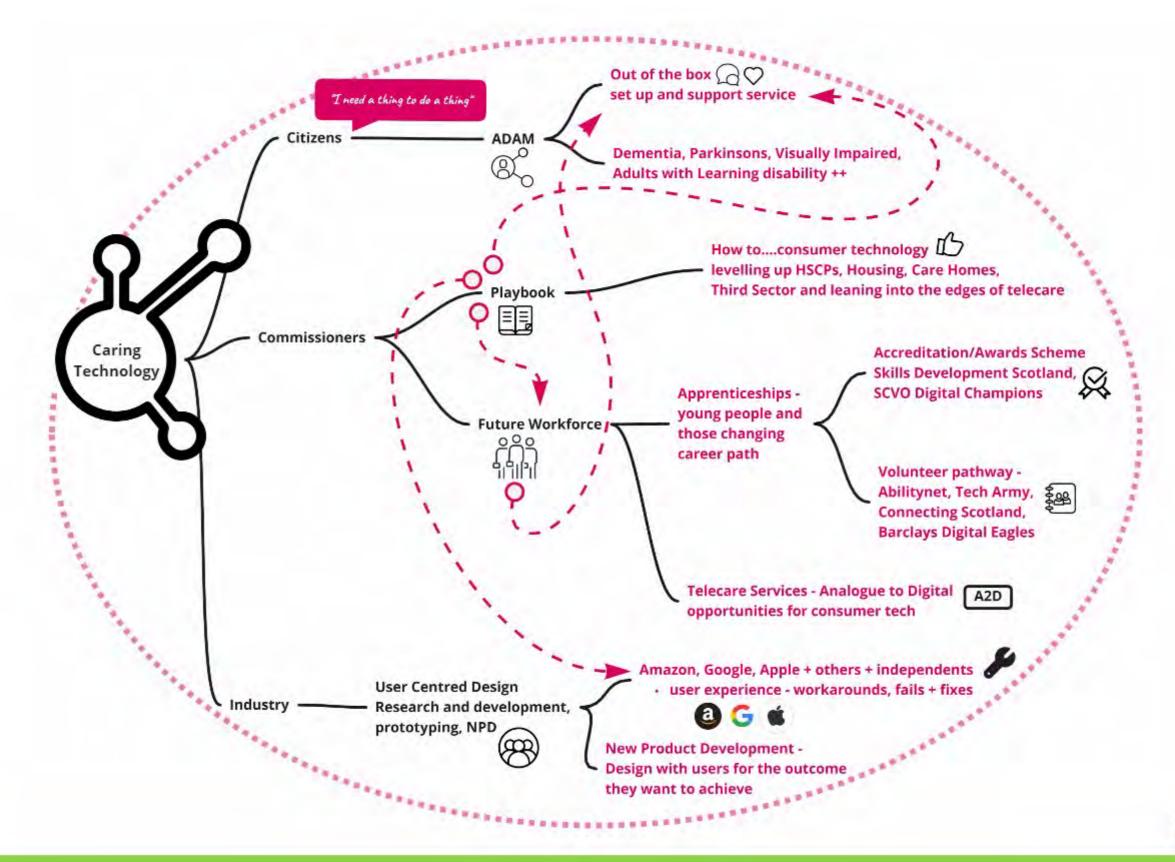
# Interdependencies .....a story in 3 parts



The learning from ToC2 has been a story in 3 parts - citizens, service providers and industry, and their interdependence, but as yet, unconnected approach. The graphic illustration on the next page shows the flow of information and resource, and how stakeholders could converge around a common approach and ambition - Caring Technology.

The Playbook is an example of this, whereby citizens, service providers and industry all have a dependency on the resource. It is also the foundation to the future workforce; an insight tool for Telecare and Telehealth; and a curricular support for a proposed apprenticeship scheme and a accreditation award.

This is described in more detail in the sections on Service Providers and Future Workforce, and Industry.



# What we have + Outcomes

### What we have

- · Principles underpinning the approach
- · Methodologies and case studies to support implementation
- Practical support for the workforce (advice, information, guidance) Consumer Technology Playbook
- Practical support for citizens (advice, information, guidance)
   ADAM meetadam.co.uk
- · Evaluation a novel tool for measuring outcomes
- Momentum gained through COVID 19 for technology adoption and acceptance

### Outcomes

### CITIZENS

- Citizens using consumer technology as a 'springboard' to a full and happy life
- · Access to inclusive and sustainable provision No-one left behind
- · User experience is consistent and equitable
- · The provision is trustworthy, safe and ethical

### SERVICE PROVIDERS

- Service Providers supported to accommodate within local arrangements
- Support for Service Providers to develop their workforce capabilities, be future fit and meet the needs and growing expectations of service users
- Future work-force development accredited learning and standard setting
- Development of volunteers with expertise in consumer technology and digital skills
- · Investment in the workforce

### INDUSTRY

- Industry compelled to work with end users on new and existing products and digital services
- · End users driving product innovation with not for

"Alzheimer Scotland was approached to lead because they have a track record in finding, testing and sharing digital solutions. This work is demonstrated by the work of their Digital Leadership Team, and in particular the Dementia Circle Model, which formed the basis of this piece of work. In previous work supported by the Technology Enabled Care Programme, Alzheimer Scotland co-produced a Technology Charter for People living with dementia in Scotland which sets out the rights and principles that should be expected, a suite of supporting information to help people make good decisions, and designed and delivered a learning programme: Confident Conversations about Technology to over 1600 practitioners, families and carers over a period of 18 months."

(Extract from Alzheimer Scotland TOC 1 Report)

### TEST OF CHANGE 1.

There is only one way to eat an elephant: a bite at a time

**Desmond Tutu** 

In 2018 Alzheimer Scotland embarked on a Scottish Government TEC programme Test of Change with 17 partners across Scotland, in Health and Social Care, Housing, Third Sector and Industry. The hypothesis was that affordable technology-based products could be of value for people living with and self managing long term conditions. We were interested in people living with dementia; adults with learning disability; people who were moving on from overnight support; and those at risk of falls and frailty.

As project lead, over a 7-month period, we had 21 case studies for the conditions and a common assessment tool to enable us to create personalised technology bundles, which we called a 'digital prescription', for each participant.

We used agile methodologies and the Scottish Approach to Service Design (SAtSD) to work concurrently on 2 pathways - Case Studies and Assessment. We overcame significant barriers around the capacity of partners to engage with the process within the timeframe of the 6 month test, and established a common way of working, which required a leap of faith for many partners. More than double the anticipated amount of time was spent engaging with partners to progress the work collaboratively, and to receive referrals for participants to become case studies.

### ToC1. NEXT STEPS - ADAM

## About Digital And Me

### The Assessment Pathway

End users and service providers were involved in 4 co-design workshops to create the assessment that we used in TOC 1. Partners specifically included clinically trained staff currently involved in assessing need, to ensure alignment with existing processes where possible. We made a prototype 'conversational questionnaire' which we trialed and validated with 21 participants. This created an opportunity to scale the work, as the assessment model could be used by others, not just the small project team, and ultimately used by citizens themselves to understand where the opportunities were for consumer technology to be of value.

Partners on the Assessment Pathway felt that the 'tool' should have a user-friendly name and so ADAM (About Digital And Me) was born. We were fortunate to become the first Third Sector organisation selected to sponsor a CivTech Challenge and, through their accelerator programme, we have gone on to develop ADAM with the ongoing support of the TEC Programme.

ADAM is part of the solution, helping citizens to help themselves and reducing the burden on services. The health and care workforce is increasingly interested in supporting consumer technology solutions and will find ADAM a helpful resource. meetadam.co.uk is now live and is a free service supported by mPower, ScotGov TEC programme and Alzheimer Scotland. We are still in the R&D (research and development) phase and working with partners to include usability for other LTCs, including Sight Loss, Parkinson's and Adults with Learning Disability,

## meetadam.co.uk











Get your recommendations

### **ENCOURAGED ABOUT NEXT STEPS**

"There's a host of tech products out there and this is pointing you in the right direction."



John, 61 is the main carer for his sister with Vascular Dementia.

### OPTIMISTIC ABOUT THE FUTURE

"We don't want to know the future, but we both want to plan for it as best we can, to be ready for whatever is ahead."



Kay's husband was diagnosed with Frontotemporal Dementia 3 years ago.

### REASSURED THAT HELP IS OUT THERE

"I've been looking all over the internet to try and find things and it can take hours. This is an awful lot easier."



Sheila, 64 cares for her husband Neil, 68 who has Parkinson's.

### CONFIDENT ABOUT WHAT CHOICES TO MAKE

"If someone says I need something for my husband, I could say let's go on and see if we can find something to help."



lan, 58 cares for his wife, Wilma, 61, and is a volunteer with Alzheimer's Scotland.

We jumped of the cliff and we are building the plane on the way down. ADAM is a wing on our plane:)







# R S VE

TOC1 established the feasibility of using off-the-shelf technology with people living with a long term health condition.

TOC2 gave us a deeper understanding of the conditions required to make technology interventions successful.

In total we have 40 Case Studies. There were 21 participants 'assessed' in TOC1 and 16 went through to completion.

Of the 24 people participating in ToC2:

- 3 were from TOC1, extending and deepening their use case
- 2 of the 24 were couples so a total of 26 people
- 13 were new participants, using a variety of devices and products
- 4 participated only in the COVID Response Micro Project
- 3 withdrew due to personal circumstances

The most popular consumer technology solution was the Echo Show (Alexa), used by 15 of the clients for keeping in touch with family and remote carers.

People also made use of GPS locator devices, voice-controlled light bulbs, hydration monitors and aids, talking photo frames, sensor activated lighting, door alarms and other equipment.

3 people were provided with 'companion robot pets', which were found to be very popular.



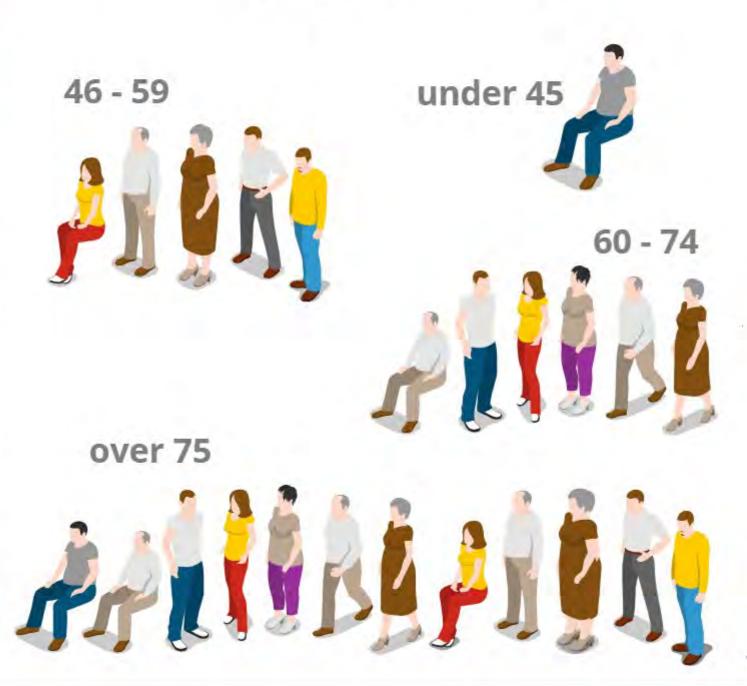
There were 24 Case Studies.

People's ages varied significantly, with the largest group being over 75.

There were a range of reasons for choosing to participate and of underlying health conditions.

- 10 were living with dementia
- · 2 had learning difficulties
- 2 were made up of a couple and one individual, had no significant issues at present but were planning for the future
- 10 were living at home with their husband or wife, many of whom also had long term conditions of their own
- 4 explicitly wanted to find a way to combat loneliness and be in closer touch with family

### Number of people in each age bracket



## ONE SIZE FITS ALL

It is very difficult to generalise any of the use cases, as each individual and family context is different (eg. technical proficiency, attitudes, existing product and platforms, family relationships). However, introducing consumer technology gives the chance to have wider conversations: "I need a thing to do a thing...". In many cases, this prompted better understanding by carers and families of their needs.

We have gathered a wealth of information and started to develop some tools, manuals and best practice. These include ideas for a 'Coping Scale' and 'how to' guides for setting up devices. There is no 'one size fits all', but a need for an easily navigated 'knowledge base for consumer technology.'

From TOC1 we had insight into the needs of the workforce and we have created a Digital Opportunities Team (DOT) at Alzheimer Scotland and the first Digital Dementia Advisor post.



### TOOLS+METHODS

### About Miro and why we use it

Working with the families on TOC2 we gathered a lot of notes and scribbled ideas, correspondence back and forward, and links to various products and things of interest. When we first started talking to our TOC2 families we were able to meet face to face, but from March onwards we moved to a blend of video calls, telephone calls, emails and texts, depending on preference and whatever we found worked best for people given the circumstances. This quickly became a logistical problem, with information in lots of different places and formats. As a team we were using Miro to collaborate and finding it useful. We moved on to using Miro as a project repository, creating boards for each family and dropping all the content from the various sources in, so that we could easily find everything. The boards have a huge amount of content that is challenging to represent in a traditional report format.



A curated selection of the case studies are available to view, which demonstrate the complexity of each unique case. In this report we show extracts to give an impression that is more manageable within this format.

# HOW WE SUPPORT

"I have successfully managed to set up photos on the google nest hub. It really is great and has inspired me to get photos from years ago to put on it. This is especially good for Gerry as he loves remembering our times in Mallorca. He hasn't seen a lot of our recent pics as they are on my phone and he cannot see them properly." Moira

# 21

# IH

### PRINCIPLE 1

'With not for' is central to how we understand what technology could be of benefit to each person.

### PRINCIPLE 2

Asset based, we take this approach, focusing on what a person would like to achieve, their aspirations and preferences.

### PRINCIPLE 3

Do no harm. We balance risks with the 'pay off' that the technology brings, taking a realistic 'real world' approach, enabling informed choice for users.

# I need a thing to do a thing

The first step with anything is to be open to accepting help. This is not a given.

People who do identify that they 'need a thing to do a thing' may already have a solution in mind. Don't jump to the solution. Stand back.

# understand the problem



We can reframe the 'problem' as the gap between where the person is now and where they would like to be. This is the opportunity space for the technology intervention. Finding out what's important to the person and their aspirations is the starting point.

# underlying needs

Underneath the 'problem' there are underlying needs - circumstances that must be taken into account as they will impact on the effectiveness of any technology that is introduced.

There's often a 'problem' underneath the problem too. Dig deep and build up a picture.

## how to get it

## right

Process following referral

- 1. First contact by phone or email
- 2. Home visit 90-120 minutes
- 3. Follow-up email or phone call to discuss options
- 4. Second home visit for set up
- 5. Follow-up phone or email
- check up on how things are going and further support to use tech
   Thereafter, maintaining contact and support as needed. Take-away things that aren't working as expected, and replace or add tech incrementally.

Getting the technology 'prescription' right takes time and depends on a number of factors. Spending time at the start; mapping their care circle; asking what a good day looks like to them; as well as understanding their level of digital competency are all essential. In TOC1 we developed a Conversational Questionnaire to capture this.

## working around COVID

Process following referral

- 1. First contact by phone or email
- 2. Video call 45 60 minutes and possibly another the following week
- 3. Follow-up email/phone/video call to discuss options
- 4. Post out tech. Video call for set up
- 5. Follow-up phone/email/video call
- check up on how things are going and further support to use tech Thereafter, maintaining contact and support as needed. Take-away things that aren't working as expected, and replace or add tech incrementally.

We were able to continue with most of our case studies, however in several cases the complexities could not be overcome. It's interesting to note that in TOC2 we have had greater levels of engagement with participants than in TOC1, showing that the digital engagement, has in fact, made the team more accessible to participants and removed the challenges of travelling.

66

A person-centred approach to social care support must be premised on ensuring citizens are able to fully exercise autonomy and choice in the supports available to them, which includes clear and defined resources directly available to citizens and a strong, healthy and diverse suite of support options tailored around the needs of local communities."

Independent Review of Adult Social Care in Scotland, Derek Feeley 2021

Citizens with long-term conditions looking to self-manage and stay on the 'happy path' don't care where support comes from, or understand the systemic barriers to accessing support, which commonly exist within health and social care.

Expectations include the ability to choose the 'right' package, and to be able to 'bring your own device', or have flexibility.

The resultant shift in Service Provision will take time, but can be seen in the Telecare Transforming Local Systems Pathways and the move towards Pro-active Telehealth and Telecare.

Where Consumer Technology sits within this is not important to the end user, however access to a trustworthy, consistent and equitable service is and should be accounted for when re-designing telecare services.

Service Providers are met with the increasing needs and expectations of service users. Whether they support citizens to use consumer technology now; are moving in this direction; or may do in the future; as part of an existing service they will have to address existing siloed systems.

Interesting work in this area, happening around the edges within grass roots enterprises, should also be supported to grow good practice.

### MODELS OF CARE

In the Independent Review of Adult Social Care in Scotland, Derek Feeley recommends systemic support to spread approaches that work well, and enable the improvements identified.

There is an opportunity for Consumer Technology to be part of the jigsaw of supports that can elevate health and social care provision from being a 'safety net' for those who need it most, to a 'springboard' for the well-being and resilience of many.





We heard about some excellent examples of innovative work that is improving people's experience of care and support while local systems maintain core supports and services. However, innovation seems usually to be the result of a combination of enthusiastic local leadership, availability of additional funding and willingness locally to change. We heard little to suggest consistent efforts to share learning, scale-up or spread approaches that work well. The current system seems to support local innovation rather than widespread improvement, which is why we have made specific recommendations about prioritising improvement programmes for self-directed support, and commissioning and procurement.

Examples of the kind of improvements that people are trying to make include:

- Reducing use of institutional/residential care
- Making better use of adaptations and technology
- Involving people and their families more in decisions
- Including wider community supports in care
- Professionals working together better across traditional boundaries of health, social care support and other services such as housing.

We have not called this chapter "new" models of care because Scotland has been committed to these approaches for the last 30 years. The problem is not that we do not have good ideas; it is that we have not acted on them at scale and with genuine commitment. We seem to rely too much on bottom-up developments that we expect to flourish without systemic support.

Independent Review of Adult Social Care in Scotland, Derek Feeley 2021

## CULTURAL SHIFT



innovations and improvements in

health care' - presented by Will

Warburton

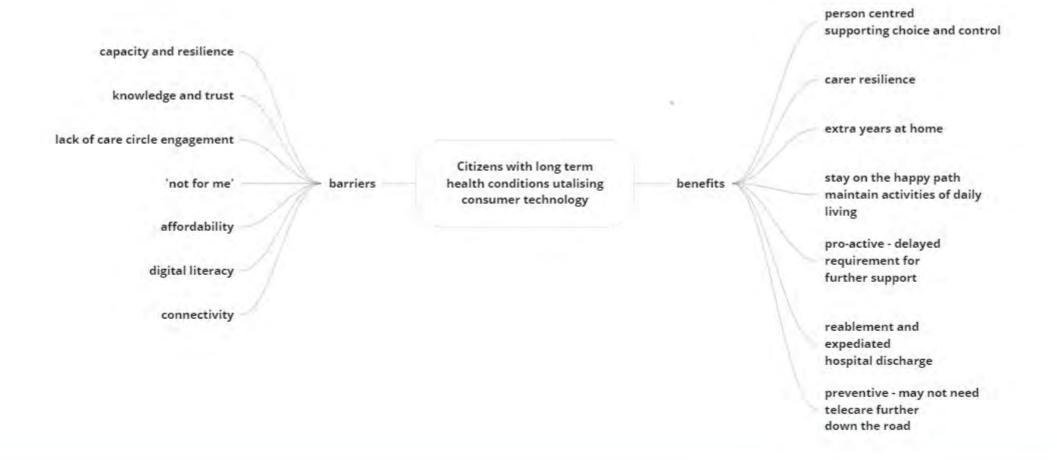
An aspiration of ToC2 was to demonstrate the benefits of Consumer Technology solutions for people with LTCs to front line staff involved in their care.

In ToC1 we experienced different levels of adoption and resistance from staff in two of the supported living accommodations taking part. Finding the hook for these support staff would have been invaluable.

COVID 19 made it impossible to go back and work with these staff and others, however getting 'buy in' from those closest to the person with the LTC, whether a family member or paid carer, is critical to the success of the technology intervention.

As a recommendation for further action, we would suggest co-designing a resource for service providers, front line staff, and unpaid carers.

# barriers to adoption v. benefits 4 citizens



# A desk is a dangerous place from which to view the world



### PRINCIPLE 1

### It takes a team to put a man on the moon

- · don't underestimate your team
- · a shared vision and purpose goes a long way

### PRINCIPLE 2

### A desk is a dangerous place from which to view the world

- · walk a mile in someone else's shoes
- take a service safari

### **PRINCIPLE 3**

### Remember it's all about people

- getting relationships right matters
- · build trust and empathy

## Design with users for the outcome they want to achieve







(Above - beta testing of the Purple Alert App)

Commissioning of new services or service redesign should involve 'experts by experience' and subject experts. Testing and prototyping in a safe environment, such as a living lab, should take place early and continuously. Don't forget back end users who are likely to be front line staff - if it doesn't work for them it won't be adopted.

## the happy path

We talk about how consumer technology can help people to stay on happy path. In ToC1 and 2 the 3 steps we took were -

- assessment
- digital prescription
- set up and use

We have evolved this model into 4 levels of service and we are road testing this within Alzheimer Scotland and with external partners Digital Dementia Advisor (AlzScot, EHSCP)
Digital Champions (AlzScot)
Adam Testing Facilitator (AlzScot)
Digital Navigators (mPower)

Levels of service to be offered

- self service
- personal shopper
- plug and play
- expansion pack

# self service v. personal shopper

Self service

meetadam.co.uk gives citizens the option to Do It Yourself.

Family, neighbours and friends are all valid helpers. Get out of the way if they just want to get on with it.

Consider doing the set up remotely where possible, so that when the device arrives with the user they just 'plug and play'.

Engage with family and care circle early and involve them more. Use them to support the adoption of the technology and get their help to reinforce where learning is needed. This is pivotal to embedding the technology.

### Personal shopper

The notion of a 'personal shopper' can be likened to the experience of participants in our Test of Change. A person who gets to know you and will find what you are looking for, without you having to trawl through the shops, internet and Which guides.

Not everyone needs this level of support, and within this idea there could be different options where set up and support are included. John Lewis\* and Currys\* have interesting models of this.

\*John Lewis Smart Solutions

\*Currys Shop Live video call support

# plug and play + expansion pack



### Plug and play

The Pandemic has shown that there is a need to improve support to carers and digital tools have an important role. An aspect of this is the need to value virtual social interactions more highly.

However, it is important to address the 'digital divide' and provide good quality tools to enable people to use consumer technology successfully.

For those who risk being excluded from the benefits that technology supports can bring, a 'plug and play' option would be helpful.

We have testing this option with Voice Assistants and with some other devices in the ToC.

### **Expansion pack**

Getting value from the technology you have is not static and should change as your needs and aspirations do.

Our approach is to layer the technology supports, introducing new devices or functionality incrementally. We find this helps to embed foundation skills and adoption, and grows confidence in the user and their family.

The idea of an 'Expansion Pack' is that it maximizes the benefit by expanding on the initial offer.

In this section we talk about the workforce skills and competencies required to implement the technology supports (both paid and voluntary).



Longer-term, problems result from failure to plan ahead for training, recruitment and retention, and failure to work with partners in health and housing in particular to model innovative new approaches that depend on the availability of a suitably trained workforce who understand each other's contributions.

Independent Review of Adult Social Care in Scotland, Derek Feeley 2021



Future workforce skills have been identified by the DHI in the September 2019 publication
'Spotlight on Careers in Digital Health and Care
Addressing future workforce development needs in Digital Health and Care'



The World Economic Forum (WEF) (2018) forecasts an increasing skills instability in the next 4-5 years: the vast majority of employers across all industries expect the skills required to perform most jobs to have shifted significantly by 2022 [4]. They also anticipate 54% of employees to require some form of reskilling or upskilling. This issue affects the Health and Care sector as well. NESTA (2018) has called for the creation of an informed labour market, where education providers, workers, students, employers and policy makers know how skills are changing, and are able to respond to these changes to counter skills mismatches and shortages [5]

# Everyone needs a Ben

### **Wavemaker Stoke**

@wavemakerstoke Follows you

Improving lives by providing training, advice and guidance for the growing digital world. Digital Health & Tele Health specialists.

Joined November 2014

1,529 Following 2,026 Followers



Followed by Cassie Robinson , digihealthwell, Gillian Fyfe, and 6 others

Tweets

Tweets & replies

Lib

Media

Likes

Pinned Tweet



Wavemaker Stoke @wa... 10/02/2021 — We are delivering our first free National webinar about digital technologies to help combat social isolation on 16th Feb here is the link here bit.ly/391141p



Everyone needs a Ben, is a reference to Benedict McManus from Wavemaker in Stoke who supported us with the COVID Response Micro Project, and enabled us to overcome some technical difficulties and guide participants with set up.

In TOC1 Rapport CIC and Life Enhancing Automation had supported with some technical aspects and we were keen to develop this role for technical assistance; to add to the skills and knowledge of the core team and to free up their capacity to assess and give follow up support.

We were unable to find a person(s) or organisation in Scotland who could supply this expertise for Consumer Tech.

In this report we refer to 3 specific sets of skills required. The first is Technical.

It is complex to manage multiple unique cases (from assessment, to set up, and expanding use), in addition to supporting with varying, but usually low levels of digital literacy, and devices that were not designed for the use cases we have for them. Having access to a skilled technical practitioner was invaluable.

# 3 skill sets required

Scale up of Consumer Tech needs a range of skills, from both the professional workforce and informal carers.

We identify three specific groups of skills:

Technical: an ability to set up devices so they can be sent directly to a vulnerable person or a family and used 'out of the box'. Technical helpline. Guides for set up have been developed with Wavemaker CIC.

Professional Care Services: occupational therapists, dementia advisers and other professions who are skilled at assessing care needs need awareness of digital technology solutions.

Consumer Tech specialists should be able to provide an interface to all these groups. Their role is to propose and specify appropriate solutions, train and support volunteers, family members. Alzheimer Scotland has recruited a Digital Dementia Adviser to work in the Edinburgh area and is developing other internal staff.

# Essential digital skills

11.3 million people (21%) lack the full basic digital skills
4.3 million (8%) have no basic digital skills at all
5.4 million working adults (10%) are without basic digital skills
people with a registered disability are 4 times as likely to be offline
28% of those aged 60+ are offline

Essential digital skills framework, Updated 23 April 2019 https://www.gov.uk/government/publications/essential-digital-skills-framework/essential-digital-skills-framework



There is a tendency to assume that essential digital skills are present in the workforce generally, however we have seen low digital literacy levels and a general lack of confidence, which inhibits service users from having a good experience of technology in all it's forms - video calling to home automation.

We have had success in building competency through providing opportunities for peer to peer learning and easy access to 'experts', in a supportive environment.

We need to build the workforce of the future to support service users to consider consumer technology as an option; to use it successfully; and make the most of out it. Let's not assume that by giving someone a device we have done the job. The work starts by assessing basic digital literacy and acceptance, and working upwards from there.

# Unpaid carers

By 2030 an estimated 6 million older people in the UK (nearly 9% of the total population) will be living with long-term illness.

https://www.kingsfund.org.uk/projects/time-think-differently

There is a significant risk that if timely action is not taken, the rising number of vulnerable people will not be adequately cared for.

Unpaid carers are our greatest workforce and should not be forgotten when creating support services or resources.

Carer burden can be relieved somewhat by remote caring solutions, enabling families to feel more on top of things, able to manage and continue working.

We have found that people who have had experience of caring for a loved one may go on to pursue this as a paid role, as a support worker, advisor or even a tech innovator. The EU has already passed this milestone: 10% of it's population are estimated to suffer from two or more chronic conditions. Most of them are sixty-five years and over.

In the UK, 18% of women who care for someone with dementia have taken a leave of absence from work, and nearly 19% have had to quit work either to become a carer or because of their care-giving duties became a priority, while 20% of female carers have gone from working full-time to part-time.

Invisible Women, Caroline Criado Perez 2020

The consumer technology devices we have evaluated offer a poor user experience, possibly for all applications, but specifically in the care sphere. However, their functions are potentially powerful solutions to widespread problems.

Clearly health and social care is not currently seen as the major market for these devices, but could be significant. There is an opportunity for designers and technical teams to engage better with this market.

The larger companies (Amazon, Google, Facebook, Apple, Phillips) are invited to work with us to benefit from our insights. We would like to share our learning and contribute to the improvement of these devices.

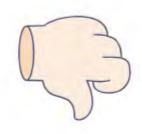
Smaller companies have a role to play in developing products targeted to the needs we have newly identified. Alzheimer Scotland is working on a number of projects:

- LE Automation and Rapport are partners with Alzheimer Scotland from the TOC1 project. We continue to work with them to refine their products and services.
- A separate development is ADAM (About Digital And Me), a digital decision support tool to enable people to select appropriate consumer technology solutions. Alzheimer Scotland commissioned this development by Lumera.
- Related products are being commissioned from Purple Alert and AddJam for COVID Response.
- A Virtual Dementia Resource Centre has been specified and commissioned by Alzheimer Scotland from Virtual Health Shed Ltd.



### made for you make the right thing

made with you make the thing right





# the BLIND SPOT

The blind spot means that industry just don't 'see' people with long term health conditions as the growing and important market that they are. Leveraging support from industry should come from Government and be pursued at a national level.

This lack of visibility is part of what causes products to 'fail' for people with LTC. Also consider -

- · Minimal user testing with outlier markets
- Companies like Apple use early adopters as testers of products and ship early with bugs and glitches that they address with updates and fixes
- Older people and people with LTC tend not to be part of the design and development of technology solutions and this lack of representation biases products towards the young and able

We need to understand how Industry views this customer base. To date it has been a challenge finding the 'right' person on the inside to talk to. Opening up a dialogue where we have the opportunity to 'pitch' and to show the valuable testing data we have gathered, would be a helpful next step.

Service providers can also add weight to interactions with large companies in the sector and invest in smaller scale technology development.



# LIVING LAB

Industry could be supported to work with Health and Social Care through a 'living lab'; a safe environment for testing, setting standards, unifying knowledge and the art of the possible.

### Living lab would

- bring together experts by experience, subject experts, industry, and health and care providers
- test interoperability; develop plug and play functionality; scope best of breed
- lead and support learning and workforce skills; the deployment of consumer technology for health and care; research and development; new product design
- encourage international collaboration and knowledge exchange

Being able to see, touch and feel something brings it to life.

We've been talking about this for years with our Dementia Circle model. That's why we have products on display in our Dementia Resource Centres.

Technology can only truly be experienced when it is plugged in and connected and used.





The Playbook is a repository of tools, references, case study examples and 'how to' guides.

The learning from TOC2 has provided the initial content for the Playbook and will be of use for Health and Social Care providers in Scotland to support the adoption of consumer technology solutions.

It is also well placed to become a textbook for a future skills academy, preparing the workforce to support proactive and preventative care through consumer technology.

Further work needs to be done to fully understand workforce and provider needs and to co-create content to support this.

If our aim, as so often stated in Scotland, is to emphasise supporting people to stay in their own homes and communities for as long as possible, we must do more to improve and adapt those homes to support a better quality of life. Even minor adaptations can deliver significant improvements...... yet we heard that for some people the process of getting adaptations and improvements done is so complex that even professionals struggle to navigate it.

Independent Review of Adult Social Care in Scotland, Derek Feeley 2021

# WHY?

DO WE NEED A PLAYBOOK

"I am sorry to report that things are not going very smoothly with introducing Echo into Peter's world. I have not yet managed to get as far as putting one of them into Peter's house. So far, I've had a nightmare of a time getting the Vodafone Mifi up and running due to issues they were having regarding changing from temporary to permanent passwords. This took myself, my husband and my daughter's partner several days to rectify. Felt very frustrated with it but eventually managed to resolve that problem. I thought at that point it would be plain sailing, but sadly not. The Echos do not seem to be coping with linking up for video calls, My husband and I have managed to do a video call using the app from my phone to the Echo earmarked for Peter's house but this then appears to lock his device into the call and requires the monitor to be unplugged for a while before restarting. We have spent several exhausting and frustrating hours trying to ensure that there are no hiccups so that Peter would see the Echo as something beneficial to have but I am gradually running out of patience or ideas. I am very disappointed that something which could be a wonderful asset in caring for Peter has so far just added more stress to my already stretched to bursting life, If you are able to give the matter some thought and perhaps come up with any solutions, I would be extremely grateful. As always, I am juggling a busy schedule of caring for Peter and my wee granddaughter.

"I think I can safely say we have reached at least a 10% improvement for Peter if not even more. The Echos are working well and his can now access the one at my house. I think I have managed to activate access for my two brothers to do drop ins too and will check that out tomorrow. Have set up Amazon account for him so he can get music and films."

June and Uncle Peter

# make it easy because it

# isn't



In the health and care space, consumer technologies are embryonic and not designed for, or often with, people with long term health conditions in mind. Clearly they have potential and this has led us to 'hack' the devices to make them behave in a way that is 'useful'. For example, setting up an Apple Watch took 20 hours (see Tony and Angela's case study).

- 1. easy to find
- 2. easy to set up and use
- 3. easy to add to and keep working

# make it easy 'how to'

### THINGS TO WATCH OUT FOR

Minimize the time between first contact, assessment and install. Things can move on quickly and people's circumstances change.

Do what you can to reduce the steps for people to get things up and running.

Keep it simple; introduce technology gradually and add layers as confidence builds.

Don't overload, or be tempted to add something in if it isn't necessary.

### THE ESSENTIALS

Getting the foundations right at the beginning will mean you spend less time overall going back and fixing things later. You also risk losing people's confidence and commitment.

WiFi and MiFi. Poor connectivity can undermine attempts to introduce smart technology. If you can't rely on the connection, you can't rely on the technology.

When adding in something new, consider the risks and the possibility of giving additional stress and frustration.

### THINGS TO CONSIDER

Time and effort is required more at the start and will pay off later.

People require support with new technology products and services.

Allow time and resource for helping with set up, either in people's homes, or supported remotely.

Consider doing the set up remotely where possible, so that when the device arrives with the user they just 'plug and play'.

Make sure to allow time to help keep things working.

# make it easy make it with the end user



Design for everyone. Make 'How to' guides available in multiple formats e.g. print, online, video. Involve the end user in the design process from the beginning. The importance of co-design in enhancing the adoption of new technology cannot be over stated, and moreover, the need to prototype 'in the wild' with end users.

### Lynette and Robin's story

Lynette cares for her husband Robin who has dementia and has underlying health issues herself. When we visited to set up some new technology with them, we were mindful that they were apprehensive about using the tech. We spent time demonstrating, practising and playing around, and left some notes and visual diagrams as an aid memoire. When we returned Lynette was still struggling. The notes were no good, even though we had been careful with language and drawn diagrams. I asked Lynette what she usually does when she wants to remember something and she produced a small notebook from the side of her chair. I asked her to make her own notes as we went through things again. This seemed to help.

# right thing at the right time

Timing is everything!



'We don't want to know the future, but we want to be prepared for it when it happens' Kay and Tom. What we often hear -

- · I want to be prepared
- · I wish we had done it earlier

Getting the right thing at the right time is essential. There can be a relatively short window of time where something is useful. Also introducing technology as early as possible following a diagnosis, perhaps as part of an anticipatory care plan, can make it easier for the person use it to it's full potential. Think about the technology ecosystem at the start and future proof it if you can, making it easier to add to as needs change.

We exchanged knowledge with others working in a similar field, which were mutually beneficial. An important relationship was formed with Stoke-on-Trent and Staffordshire NHS.

Dr Ruth Chambers, GP and CCG Digital Lead, piloted the use of 50 Echo Show (Alexa) Digital Assistants with people living with diabetes.

Devices were pre-loaded with 'skills' to provide useful resources, relevant to diabetes. The health provider partners worked closely with two small companies, who provided technical services, both of whom we later engaged with.

Wavemaker CIC provide technical support and training on the use of voicecontrolled assistants, particularly Echo Show.

Virtual Health Shed use virtual and augmented reality tools to create educational simulators, as well as designing 'Alexa skills' for the Echo Show.

Results included improved independence and better mental health. The impact on clinical management is being evaluated.

The Stoke model was to provide devices at scale, with minimal intervention and benefit from feedback. This contrasts with our own, which is more measured, with greater support but lower numbers of use cases.

However, in both of our projects we needed high quality technical support and were able to share this learning to great effect. Wavemaker CIC joined our COVID Response Micro Project and worked with us to develop a robust set-up guide.

We also made joint approaches to Amazon technical team to get quick answers to our questions. In the main, they were not able to immediately solve issues, but indicated that this was a design limitation. We have the contacts with whom to work further, if there is scope for informing their design thinking.



"We have an initiative starting soon to work on collating available resources for Alexa devices"

Gavin O'Duffy
Technical Strategy Lead,
Alexa Solution Provider
Network Europe

Wavemaker have continued discussions with Amazon, who have been interested in the work we have been doing and the usability issues we have exposed.

Amazon are looking at facilitating work being done in the field, but appear to have limited capacity in this area. They recognise that we are trying to use their product for purposes it was not designed for and are generally supportive, but not proactive.

@DrRuthChambers @wavemakerstoke virtualhealthshed.com

# Researc International abou





The Centre for International Research on Care, Labour and Equalities (CIRCLE) at the University of Sheffield are researching ageing and care, particularly with regard to the use of digital technologies.

We spoke to Dr Matthew Lariviere who is a UKRI Innovation Fellow at the Centre for International Research on Care, Labour and Equalities at The University of Sheffield. He is a social anthropologist and gerontologist interested in two primary research areas: (1) cross-cultural understandings and experiences of ageing and care, and (2) the challenges and opportunities for technologies to support older adults, families, communities and the care workforce. This is outlined in his report on 'Accelerating implementation and uptake of new technologies to Support Ageing in Place'. He also recently presented at the TSA conference.

The CIRCLE work at University of Sheffield resonated with our approach and helped to set a stronger theoretical context.

The description of both caring, and the process of embedding consumer technology into lives in a useful way, as "work" was one we found particularly useful.

@MattLariv circle.group.shef.ac.uk

# It's almost impossible to include all the material we collected around our case studies. Perhaps the most impactful insights come from the participants themselves and you can read some of these comments here.

This cross section demonstrates the value for those: living alone and being supported by family remotely; living with a partner; recently moved into long term care.



### PETER

June is very fond of her Uncle Peter.
He lives alone and she has would like help to care for him remotely.
June also cares for her 2 year old granddaughter while her daughter, who is a key worker, is at work.
Sometimes she feels overwhelmed.

I was very downhearted and pretty exhausted at the weekend but have managed to pull myself back up from the chasm and got my mojo back. I am still determined to try to maintain Peter comfortably and safely at home as long-term residential care would involve him being expected to self-isolate and I think that would be very traumatic for him.



## MARY

Today Mum had another Alexa call – 45 mins with my sister in Australia – they were singing and joking and laughing. Following the call she had a garden visit with my other sister.

Mum had not been engaging in any activities since moving and the care home contacted me this afternoon to say Mum had asked to do some drawing. They said her mood has lifted since having the video calls and the garden visit and she is engaging with staff and much chattier – all in the space of 18 hours.



Mary pictured above and quote from her daughter Fiona on how technology made the transition into care easier for the family.



### NICOLA

Just to say that Nicola seems to like her cat thank you... she's called it
Simba...with a little help from her friends!... a number of the residents and staff have seen it and it went down well and they all seemed to like it....it's very addictive and will certainly help pass some time for her



Nicola is a young woman with a learning disability who we first met in TOC1. Nicola enjoyed going to activities most days and loved music and seeing friends and family.

We were back in touch with Anne, Nicola's mum, and heard that lockdown was really restricting her access to the things she most enjoyed.

The highlight of her week was the calls with her sister who had a new puppy. We introduced her to a companion pet who she named 'Simba'. Now Nicola has her own pet, with all the benefits, but none of the mess!

# GORDON

Gordon loves his new Doro GPS watch. I can't tell you how much we appreciate this. It's just what we needed. I could have cried.
Thank you so much.

Gordon in the photo and quote from his wife Sue.





My Dad's Alzheimer's had progressed to the stage that he could no longer live by himself so he moved into a care home about 3 months ago. Prior to this my sisters also noticed a deterioration in his mood. We attributed this in part to not having the same physical contact ie because of COVID we couldn't hug him and reassure him physically. So to help with the transition to care and provide him with physical comfort, we got him the cat. He named her Kitticat and decided she was a girl. We were sceptical at first as my Dad is a retired University Lecturer and very academic. We thought his intellect would prevent him from connecting with a robotic cat. However out of everything we have got him, this was the best purchase we made as it's given him the most benefit. Somehow he is able to suspend belief that it's not a real cat and obtain all the benefit of a real cat who doesn't "urinate or need feeding". He marvels at how much Kitticat enjoys watching the news as much as he does. Not only has Kitticat provided a great deal or comfort and joy to Dad, she's given us, his 3 daughters an opportunity to connect with my him by providing a positive focus for conversation which is delightful and very special.

David with Kitticat and quote from his daughter Anne in Glasgow. David was mainly living in his own home during the time we had contact with him.

## DAVID

David (88) has a diagnosis of Alzheimers disease and lives in his own home.

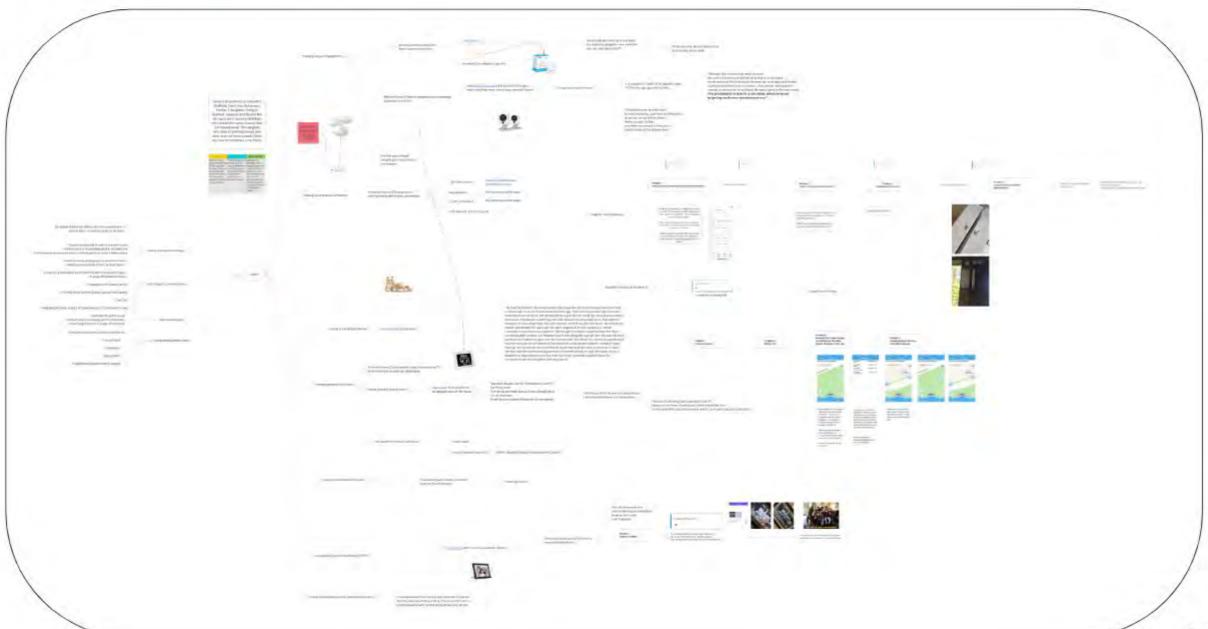
He has 3 daughters, living in Glasgow, Sheffield and Boston MA.

All his daughers are involved in supporting David, but only one lives close by and the burden falls to her, in the most part.

She visits 1-3 times a week but finds this challenging as she has her own family and works as a primary school teacher.

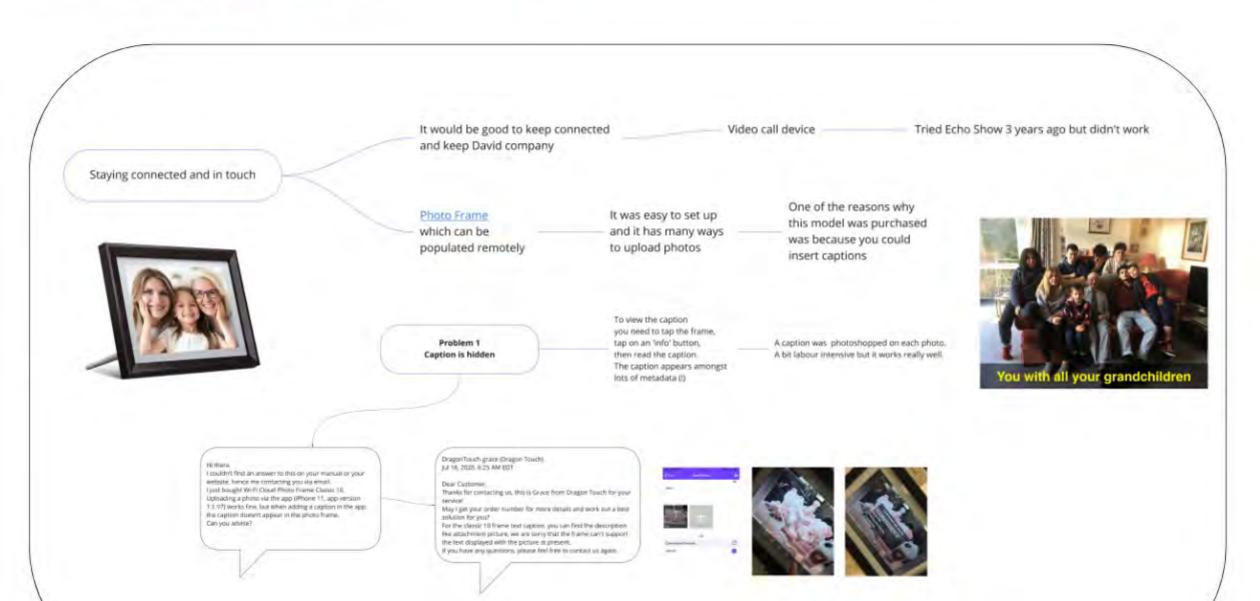
David also has a carer who was visiting twice a week, but the family raised this to 3-4 times a week, to meet his increasing needs.

To protect David from COVID19, it was decided for a period that the carer would stop visiting. This put a strain on his closest daughter who started doing all the care herself.



### DAVID

### Staying connected and in touch



# DAVID

### Having a safe and happy home

Having a safe. and happy home

David might be experiencing sundowning (potential risk of fail) Indoor CCTV cameras were installed at the bottom of the stairs and in the living room, near a step, potential hazard.

One of the reasons these cameras were bought was because you can speak through them remotely via the app.

Setup was straight forward

Very intuitive app, clear language, clear interface / features

It is possible to 'invite' other people to view CCTV in the app. great for families.

"Although this solution may seem intrusive, we used it to make sure dad was ok and give us an insight on his nocturnal life. It turns out he never got up at night and he had a pretty established routine. However, the cameras were pivotal in making us realise that his quality of life wasn't great and he was lonely. This prompted us to look for a care home, where he would be getting much more attention and care."

"Notifications can be a bit much but we are paying a premium (E2.49/month) so we can set up 'Activity Zones' where you get notified. only when movement is detected in specific areas of the camera view."

"After dad went into care. we left the smart cams. and the door sensor to monitor the empty ргоренту."





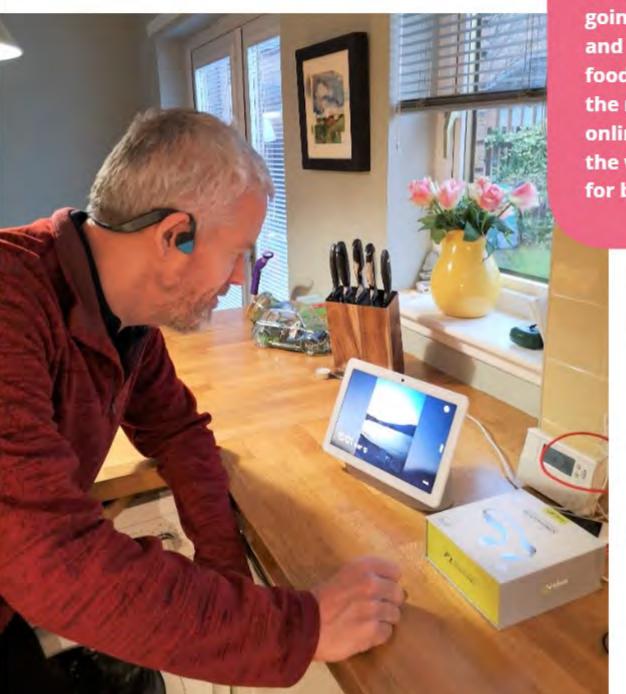






# STS

Got radio working. Gerry phoned up radio Clyde and asked as when we said play radio Clyde it didn't work. Advised to say hey Google play Clyde 1. Works a treat.



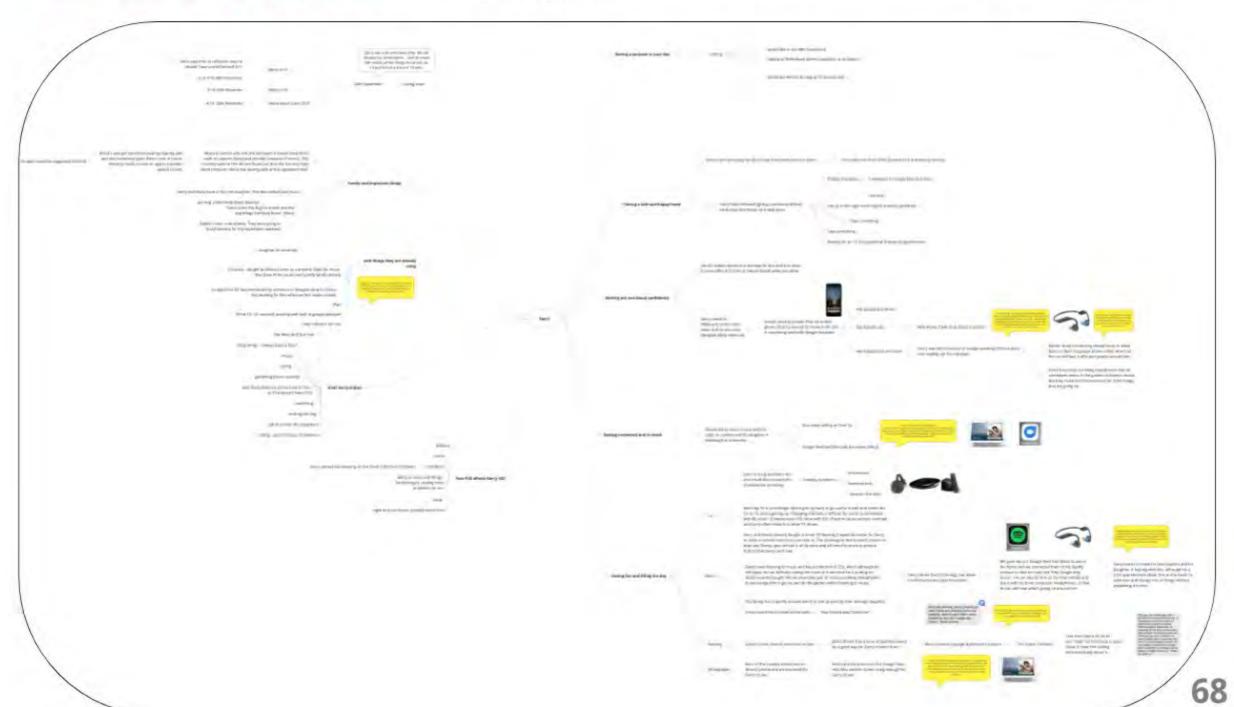
"I'd had a mega busy day yesterday building flat pack furniture and then going for the weekly shop. Came back and Gerry said will we get Chinese food? This usually means me getting the number and trying to order online. Gerry asked Google to phone the wok wong and placed the order for both of us... I could've cried."

> Gerry with the Google Nest **Hub Max and Bone** Conducting Headphones. **Quote and texts from his** wife Moira who has hearing loss.

Yes all fine. Ger "read" his first book in years. Great to hear him talking enthusiastically about it.

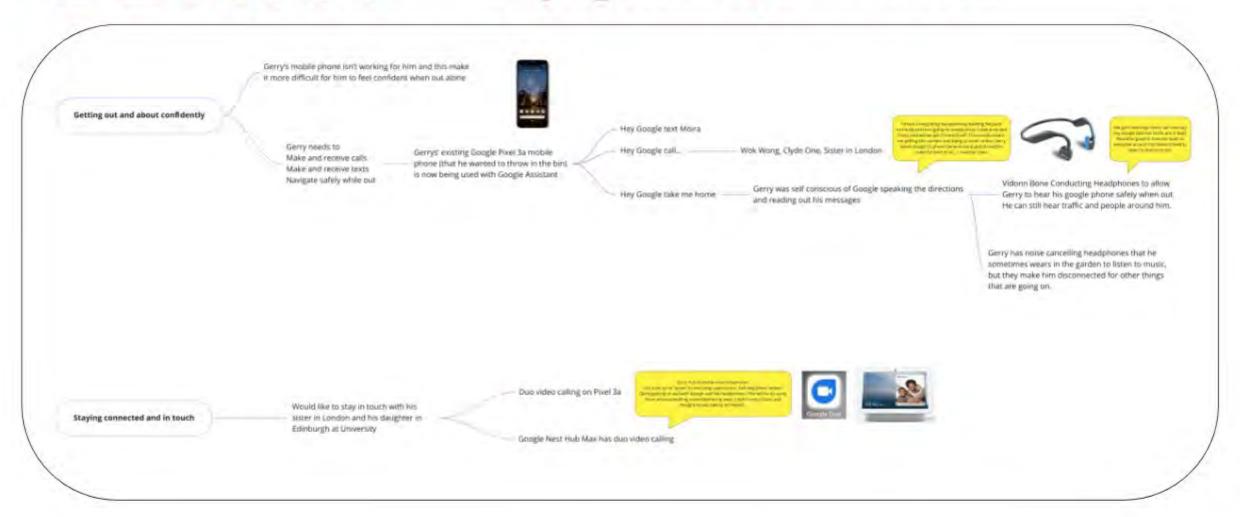
### GERRY

Gerry (62) has a diagnosis of Posterior Cortical Atrophy (PCA), a rare dementia affecting vision and depth perception, as well as memory. Gerry lives in his own home with his wife Moira and their 13year old daughter. Their older daughter is at university in Edinburgh. His wife and younger daughter have hearing loss. Gerry is retired from a maintenance job that occasionally took him to work abroad and he was used to speaking to 80 people in a day and being very hands on and sociable. Moira is taking a year off work to support him.



### GERRY

### Getting out and about confidently Staying connected and in touch



Gerry has a good sense of humour and makes a joke of the many challenges he has day to day. His loft is full of tools that he can no longer use and when he pulled down the loft ladder to go up, he walked full force into it because he didn't see it was there. When he was out for a walk a passing bike took him by surprise and he almost fell off the pavement. Gerry says that what he needs is portable radar technology. He is keen to find anything that can help him with day to day challenges.

# GERRY

### Having fun and filling the day

|                                |             | Gerry is a big Star Wars fan and would like to watch<br>The mandalonian on disney   | looking at the options   | Chramecast harmony flub amaton fire cube   | ed   |  |  |
|--------------------------------|-------------|---|--|--|--|--|--|
|                                | tv -        | watching TV is a challenge. Morra gets up early to go out<br>for a walk and leaves the TV on for Gerry getting up.<br>Changing channels is difficult for Gerry to coordinate<br>with his vision. Contemporary TVs show with loss of<br>action cause sensory overload and Gerry often restarts<br>to older TV shows. |  |  |  |  |  |
|                                |             | Gerry and Moira recently bought a smart TV thinking it would be better for Gerry as it has a remote control you can talk to. The challenge is that to watch shows on Apps like Disney, you can't do it all by voice and still need to louch or press a button that Gerry can't see.                                 |  | ED-14  | 3  | Suppose and provide account of load, they pass industrial and it has been accounted from the load of t |  |
| Having fun and filling the day | Music       | Gerry loves listening to music and has a collection of CDs, which although he still plays, he has difficulty seeing the cover to know what he is putting on. Morra recently bought him an expensive pair of noise cancelling headphones to encourage him to go out and do the garden whilst listening to music      | Gerry thinks that<br>technology has made<br>his life harder  | We gave Serry 2 Google Nest Hub<br>the home and we connected them<br>account so that he could ask "Hey!<br>muse", He can also do this on his I<br>use it with his bone conductor hea<br>be can still hear what's going on an   | to his Spetify<br>Google play<br>fixel mobile and<br>dphones; so that  | Gerry wants to make his own playlests and hi<br>deaghter is helping with this, atthough his is<br>apprehensive about this as she tends to rake<br>over and change lots of things without expla-<br>it to him.  | e bit.   |
|                                |             | The family has a Spotify account which is mainly used by th<br>Gerry would like to listen to the radio. — "Hey Google pla   |  | as when we district seek.  | is produced for the same and an extension of the same and |  |  |
|                                | Reading     | Gerry's vision electric allow him to read   | Morra thinks a book at bedsime would<br>be good way for Gerry to wind down                             | Moira created a gongle<br>audiobooks account   | Tim Peake Limitless'   | Text from Moira 26.10.20<br>Ger "read" his first book in years. Great to<br>hear him talking enthusiastically about it.  | Hi Nicola, Got the foo fight of the<br>fablit fivery hams should have one<br>yee positive story. Ger asked if I<br>could find a capy of his priced<br>childhood (teen) possession. A<br>recording of The Story of litar wa   |
|                                | Photographs | Most of the couples photos are on<br>Morra's phone and are too small for<br>Gerry to see.   | Mains put the photos on the<br>Google Nest Hub Max and the<br>screen is big enough for Gerry to<br>see | The contract because had a process on any power and the above process of the proc | 2  |  | with neuration by Rescore Lee Bio<br>Within half an hour of found it my<br>vimes loaded app to my ghore at<br>"san" it to the Google rest hus,<br>it so happy, the only lost in on too<br>and is scared to try and play it as<br>thries it will get chewed up The<br>you appar it. |

# RESPONSE COVID S S

"We think putting this kind of technology in place before it is needed is a great idea. We were a bit unsure but are now quite relaxed and confident using it. It can take older people a while to feel comfortable with new technology, it make a lot of sense to get used to it while you are still fit and healthy.

We find it great entertainment and a good way to talk to the children."

Ian and Anne are planning for the future.



Lockdown meant that vulnerable people were shielding and thus isolated from their usual care circle. The impact of isolation for this group was proportionally higher. The COVID Response Micro Project was implemented within TOC2, as a targeted activity to address this need.

The vision was a 'mental health food parcel', that vulnerable people could use with minimal set up to access support.

The challenge was that the device had to be set up before sending to the vulnerable person and to then work 'out of the box', with all passwords and contact details already there.







Three different devices were evaluated: Echo Show, Facebook Portal and Google Nest Hub Max. We nicknamed the project AGP - Alexa, Google, Portal

Five key functions were selected:

Drop in to nominated contact list

Music – radio of choice and singalong music, with words as subtitles
Reminders – set by both remote carers and client, need an active reset
Shopping lists – items added by client's voice and visible to remote carers
Calls – to an agreed list of people using their 'natural names'

## What we did

- Conducted initial research to understand the capabilities of 3 screen based voice assistants
- Using TOC1 experience to create a worst-case scenario that encompasses the many real challenges families face when introducing digital technology to older generations (ie many do not have smart phones)
- · In depth user journeys were researched and documented
- · we identified a 'persona' who typified many individuals
- · Designed around their family circle, with 1-5 key contacts
- Identified uses or functions that would best support people facing isolation
- Test and compare Echo Show 8, Google Nest Hub Max, Portal by Facebook against the scenario to identify potential pitfalls and required workarounds
- Tested the remote (did not do fully remote on google or Alexa) set up and use of each device with at least one family
- Compared how each performed across the tasks
- · Drafted how to guides created for each device
- Case study examples

# 

The key challenge was to enable a device to be sent to a shielding person, pre-loaded with contacts, photos and without the need for lengthy set up. This was prototyped successfully and 'how to' guides have been developed for each device.

Voice controlled assistants were selected as they require minimal technical capabilities. The three devices are representative of the main products on the market.

All three systems required the setting up of accounts, often multiple for the vulnerable person. In some cases they also needed to have a smartphone with apps.

Although the Echo Show and its Drop-In functions performed well and may be a good solution for a majority of users, there were limitations. The camera quality is weaker than the other two devices, meaning that it could not be used, for example, to advise someone how to use a remote control as the buttons could not be read. Both Facebook Portal and Google Nest Hub Max incorporate camera panning functions, which gave a better quality. Finally, the Echo Show performed relatively badly with background noise, meaning that a quiet room is essential.

Addressing the challenges for three different devices enabled the team to develop a better understanding of both user needs and consumer technology solutions.

The work is continuing with four families who are using and assessing their devices over a longer period.

The needs of each family were very different, reflecting both the clinical condition of the vulnerable person and the nature of the care circle.

Some clients had family members in other countries and time zones. Consumer Tech devices worked well for allowing everyone to contribute.

There is no 'one size fits all'. Instead, what is needed is a set of tools to enable users to navigate their options and make informed decisions.

The tools being developed include set up guides, which have already been tested and used with new clients.

## Summary of case studies

## Hannah and her family - Family dynamics - Google then Echo Show

Hannah's mum supports her elderly parents. Hannah's grandparents. Grandmother has dementia, grandfather has heart problems. Lockdown made it difficult for the family to care for the grandparents. The grandparents underplayed some of their health problems, resulting in hospital admissions for them both. The family were looking for a video calling device that required no participation from the grandparents to answer.

Hannah tried the Google Nest Hub Max device, setting it up herself. Unfortunately, the family found this unworkable, mainly because they did not already use Google devices and accounts. In other words, they did not have a 'Google ecosystem'.

The family decided to try the Amazon Echo Show and are now successfully using the Drop In function. Other functions are slowly being explored. Family dynamics make this installation a good example of the softer considerations that need to be taken into account around introducing Citizen Tech.

## Gerry and Moira - Tackling hearing loss - Google Nest Hub Max

Gerry and Moira are a couple in their early 60s. Moira has hearing loss, Gerry has Posterior Cortical Atrophy (PCA).

Gerry was introduced to the Google ecosystem as part of TOC2 and was using it well, with a smartphone and other devices. The Google Home Hub Max was introduced and he and Moira are exploring its potential across all use cases and introducing smart home controls.

## Anne and Ian - Getting prepared - Echo Show

Anne and Ian are a couple in their mid 70s, with no medical issues. They and their family are keen to introduce them to consumer technology now, before it is needed, to help them 'acclimatize'.

They have been successfully using Drop In with their children's families. They independently started to use the Alexa voice assistant for entertainment.

## Bill and Mattie - sight loss - first full remote set up of the Facebook Portal

Bill and Mattie are a couple in their late 70s with health challenges. Bill has diabetes, macular degeneration and can no longer walk.

The aim was to help them call their children and grandchildren. The phone is now beyond Bill's capabilities and Mattie struggles with digital technology. Another benefit is that being able to see their parents gives the children a better insight into their health.

In the first full test of a preloaded device, Bill and Mattie were sent a device already set up to run all the use cases they required (except Audible). This has been successful. They now plan to use it to share photos of their grandchildren, while visiting is restricted, and to let Bill listen to Audiobooks (a new use case).

## Cathy - Single person living independently - Echo Show

Cathy lives on her own and has dementia (see case study).

The family have found the Echo Show useful for Drop In, giving peace of mind that Cathy is coping and taking medication.

During the period we were working on AGP we were also supporting the Connecting Scotland initiative and to date Alzheimer Scotland has successfully deployed over 400 Chromebooks and iPads.

However we felt there were some limitations with the devices offered for our people living with dementia and other long term conditions. We would like to see the Connecting Scotland offering extended to voice assistant devices.

## **Connecting Scotland limitations**

- Touch sensitivity can be lost in older populations, meaning that tablets can be tricky to use
- · Laptops can be complicated to navigate
- Both Chromebooks and iPads require a level of ability and often require support to use

## AGP opportunities

- Voice assistants had been successfully deployed with people with long-term conditions in previous test of change
- Hands free, auto-answer video calling is supported using 'drop in' on the Echo Show
- Low cost, approx. £80-220 with no ongoing costs/subscription
- Once set up, many functions can be activated by voice, or are passive
- Always on (requires Wi-Fi and mains power, or MiFi)



## Echo Show best for

- Drop-in, hands free, auto-answer video calling none of the other devices do this
- Also useful for remote set up of reminders, alarms, sharing of photos and shopping lists
- Can be set up remotely and then connected to WiFi in home
- Most used system
- Wide range of compatible peripherals
- Currently cheapest of the 3 devices (Next Generation will double the cost)

## **Echo Show limitations**

- App and device can be glitchy delete and reinstall App, switch device on and off again
- Camera not as good as other devices
- Struggles with background noises
  - New generation likely to upgrade both and will introduce a 'follow me' camera function

## Portal best for

- Valued by families already using facebook made it easy to put on photo content
- · Good for children who liked the gaming facilities and could be encouraged to join calls with grandparents
- · Camera and microphone work well and has 'follow me' camera function
- Good for group calls with multiple family members in different locations

## Portal limitations

- Dual 'Assistant' functions confusing uses Portal for some tasks and Alexa for others
- Has the Alexa Assistant but not the full functionality of the Echo devices
- Not the intention of Portal to be a smart home hub, more about entertainment

## Google best for

- Search function is far superior to other devices and good for those desiring information
- Best audio output
- Google Assistant will be familiar to those using it on a mobile phone
- Easy to 'cast' to useful for sharing music or video clips of family

## Google limitations

- Cumbersome to set up unless care circle already used Google devices and had account
- · We were unable to set it up remotely
- Highest priced of the 3 devices
- Calling must be done through Duo, not direct to a phone number e.g. GP surgery
- 'Connects to everything, works with nothing' not an easy device, losses connection with smart lighting

## What's needed to prepare for scale up / integration with ARC and proactive telecare?

Our recommendation would be to focus on the Amazon system as it was by far the best of the 3 devices.

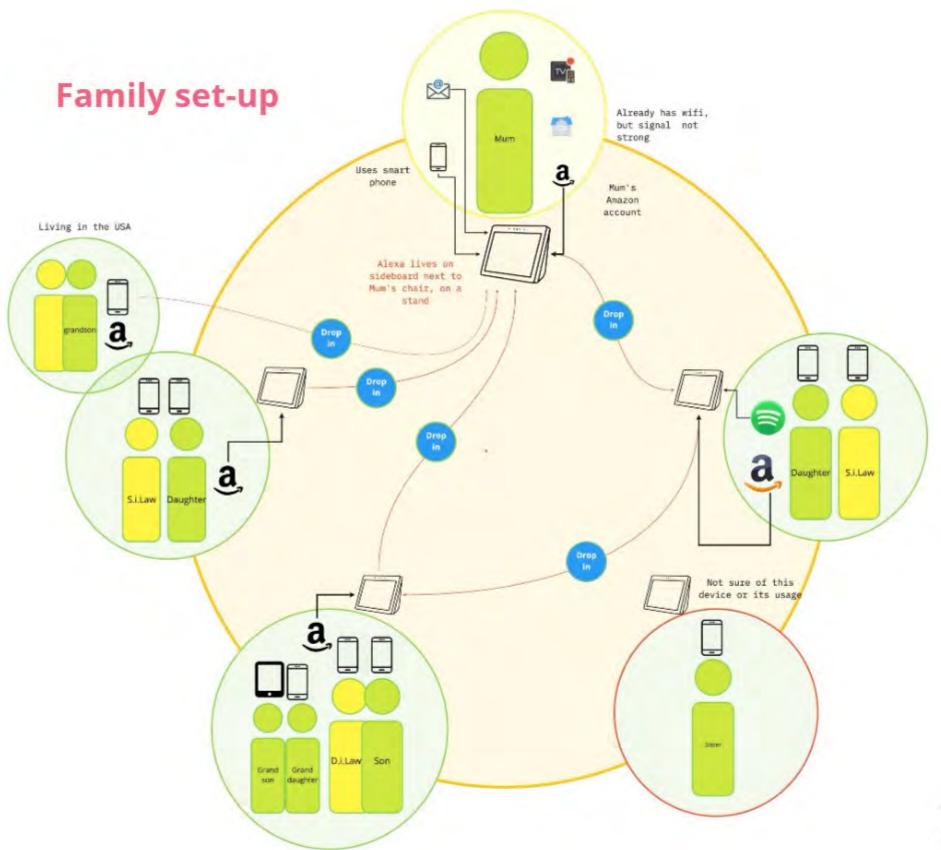
(The Apple HomePod was not part of our test as it doesn't have a screen - no video calling. The HomePod acts as a speaker for your Apple phone, or iPad, but doesn't enable calls in itself. https://support.apple.com/en-gb/guide/homepod/apdeaa15a6c3/homepod)

The Portal has potential and choice should be considered. Similarly, Google has value for some users. Although Google used to support calling, it no longer does. Calling must be done through Duo, not direct to a phone number e.g. GP surgery. (As of mid-December 2020, if you're in the UK, you're no longer able to make Google supported calls on your speaker or display. You can still make audio or video calls through Duo).

Managing a test of all 3 devices would be a challenge as each has very specific set up and use instructions. Building on the guides we have created; manuals would be necessary for each and perhaps a version for families 'doing it themselves' and another for 'digital champions' providing this service.

A suggestion would be to start with 20-30 Echo Show devices – 10 DIY and 10 set-ups supported, and perhaps a further 10 that are already in use in people's homes (retrofit set-up may be required here, or some modifications to the device permissions).

There are perhaps, considerable challenges around connectivity to the ARC, Cyber security, Privacy etc. Industry giants like Amazon, Google and Facebook would need to have an appetite to 'open' their devices to working in this scenario. There could be learning from Communicare 247, who are using Alexa in their current Can Do Challenge with Glasgow.



## CATHY

## Story of the family

Cathy lives by herself in the family home. A strong independent lady, she now has a diagnosis of dementia and her family are banding round to care for her.

Previously, she habitually went out every day to pick up the paper and some shopping at the local store. This is now beyond her after a fall and some disorientation, when she was out.

She has three children, both sisters and a brother live locally. Her eldest grandson lives in America. Her friends tended to be face-to-face meetings at her social clubs so she has limited contact with them now.

She has a cleaner who comes in to help with the house (at the family's insistence) Food is prepared and delivered now. Cathy has been reluctant to contact the family too frequently as she feels they have their own lives and does not want to interrupt them. She loves the visits by grandchildren, is a keen sports fan and watches this on TV.

Cathy was living with her daughter during lockdown and the extent of her dementia was made more visible to the family. She has moved home with a care package in place with two visits per day. So far, this has worked well with no pushback from Cathy - which is a relief.

Cathy tends to switch the Echo Show off at night, so the carers have been asked to ensure it is switched on each morning. Her daughter has been on her own Echo Show when carers have been in. They have been surprised and had never seen such a thing, so there is a need to raise awareness of the benefits of the technology. Her daughter C (shielding during lockdown) used Echo Show to participate in a social work reassessment of Cathy's needs where daughter R was with their mother (Cathy) and the social worker, in Cathy's home.

Since moving back home Cathy has been very reluctant to leave the house. She is quite unstable on her feet. Now, if out with the family, she always recites the street name and her house number and looks for verification that it is where she lives.

## CATHY

## Set-up and use

## Background:

This family was set up with Echo Show devices as part of the TOC2 project before the COVID lockdown. It was part of a suite of products the team suggested for Cathy to help improve communication with the family. Cathy was withdrawing as she 'did not want to bother' her children who all 'had their own lives now'. The hope was that the device would make it more fun to chat and give Cathy a good reason to connect more with the family. Cathy was asked if she would help test the products as part of a project, this approach helped adoption. She felt she was playing a useful part, rather than being the subject of an intervention.

## Set up:

The TOC team set the device up using Cathy's own phone, email and her existing account details for Amazon. Her daughter was given a second device to ensure they could communicate easily from the beginning.

## Use cases:

The Team enabled 'drop in' but did not set up any other functionality at that time. The aim was to introduce Cathy to the device slowly. Then the COVID lockdown intervened and the project continued virtually.

## Use:

The family adopted the Echo Show wholeheartedly and now all have their own Echo Show devices that connect to Cathy.

## Cathy's case study

This case study is an example of a basic initial set up, to enable Drop In and News. The family were left to find and use any other capabilities that interested them.

## What do you use it for?

Catherine has been dropping in daily to that with her mum, checking that she has taken meds, helping her put in eyedrops, doing crosswords, watching TV with her and eating dinner together.

Tell me about how you set this up - who has permission to drop in and how did you decide this list?

The family decided they would all have permission to drop in.

What were the hurdles you had to jump over to get it working? The TOC team set it up.

Drop in has stopped working now and again for all the family - software glitch. Have to phone mum and ask her to accept the call.

"Sometimes pressing the button is too much for mum and she needs VERY basic instructions to help her press the green button to accept the call"

## What is the best thing about it when it is working?

"Mum never uses the device to call us. She does not call out in any way. This is the only way we can keep in contact with us. She can no longer work her mobile."

The family is not sure if she can operate the landline.

The family speak to Cathy every day using the Drop In function. This has been an invaluable tool in supporting Cathy and the family cannot imagine doing without the devices now.

## Commenting on the other use cases:

## Reminders

The family have not set up this function. Mainly this is because there is no idiots' guide to doing it. Also, now that carers are coming in daily, there is less need. Shopping lists

Never used for same reasons as above. They are using a notepad instead. In this way the carers can see what needs to be brought in too.

## Photos

They have not used this facility as yet. Again, there is no 'idiot's guide to set up'. "It would be useful if we could put name labels on the photos as reminders of who people are".

Music and radio - "We haven't set this up. Mum would not normally listen to radio or music - more likely to watch TV".

## CATHY

## learning and next time

## Learning

It was good to be able to use the device to sit and have dinner together or watch a TV programme together.

The echo show device needs a stand, to ensure the angle is appropriate.

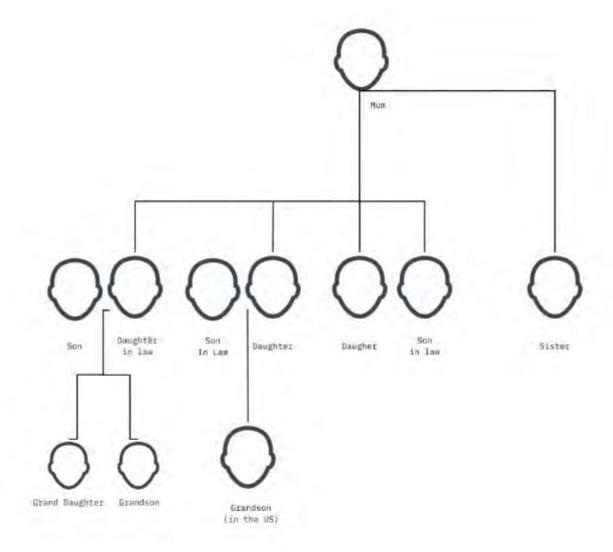
Echo Show helps Cathy take medication (eye drops) as her daughter can see what she is doing and support her. It has been useful for the family to be part of any medical/assessment visits to Cathy, using Echo Show to join remotely.

Background noise is a problem – the Echo Show did not work when Cathy moved to her daughter's open plan home during lockdown, as the ambient noise was too much of a distraction.

Family commitment makes this work. If the device is introduced as part of a project, it helps people accept it, they feel as though they are 'helping'

## Next time we would:

- · have set up a family Gmail account
- · enabled a shared calendar
- helped the family to load photos onto the device with names for all the people.



How do we measure the impact of any changes we make for a person living with a long term health condition?

It can be hard to know if your input has improved a family's life when they are struggling to support a person living with a condition like dementia. When the condition is progressive, things don't usually get 'better' even if we have made one aspect easier.

It is not always easy for families to identify the main issues or to decide what might help them, this can be doubly difficult to articulate to an 'outsider'. When progression is gradual, families adapt gradually – and sub-consciously – to difficulties. This slow loss of capability is absorbed without even noticing. For a time, families get by, but all the small changes can eventually mount up and become a struggle.

## Coping scale

| 1  |  |
|----|--|
| 2. |  |
| 2  |  |

5

6

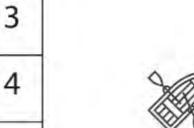
7

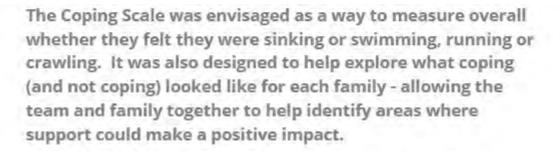
8

9

10









However, we recognised that each family and each person living with dementia have very different problems. The Coping Scale needed to look at them as individuals and explore the various elements of their lives. It was important to prompt conversations around the different aspects of their lives, before starting to identify solutions to their problems. The purpose of the Coping Scale was to record a baseline, before any changes were introduced, to be able to measure the benefits later on.





# SWIM SINK

Example responses -

A gentleman with dementia was struggling to speak (word-finding). His family were looking after another elderly and very ill relative in their home. There were lots of doctors coming and going. He scored himself 3.

He then shared that he would be surfing if: He could be more clearly understood He had time to do things, relax and have time to think

He stayed as capable as he was at that point – no major decline in his condition. He could have more cues when with groups of people – to be led into the conversation

He would be in the lifeboat if He was unable to be understood
There were too many people coming in and
out of the house
He was asked too many questions too
quickly.

With another gentleman, whose communication was very challenged and could no longer make himself clearly understood, his carer shared that if he was surfing he would say "that was terrific" or "that was something else".

When he was struggling - snorkling - he would follow her around in the house being suspicious.

Both states could then be used to help determine if the gentleman found the team's interventions useful or not. Testing the proposal

A visual prompt was created, loosely based on common parlance used in response to questions on how people are doing.

We used visuals with the numerical scale rather than specific wording, this is to allow each interviewer to judge the family situation and adjust their descriptions with sensitivity to the setting and personalities.

The terminology suggested by the images is often used ironically and this was chosen deliberately to allow families to use irony as a defence when sharing their potentially desperate challenges.

"swimmingly", "surfing the wave"

"snorkling - under the water but still breathing"

"sinking/ drowning"

The numerical scale is an easy way for families to quickly set a 'level' or give an indication of how they are doing.

1 would be everything is going swimmingly, you are on top of the wave

4 you are in the lifeboat and having to row

7 snorkling - under the surface but still breathing

10 in the depths - you are struggling, not in a good place.

This was useful to allow us to compare between sessions and as an easy starter to the conversation.

The visual scale was then used to unpick what coping looked like for that family, gather examples of problems and aspirations.

We 'bracketed' the numerical value given by the family, asking what one stage up would look like and one stage down.

For example:

What would be going on in the family if you were in the lifeboat? How would you know if you were snorkling? What tells you that you are surfing?

## FINDINGS + FOLLOW UP

## Interesting points to follow up:

The number can also give an indication of how the family approach their challenges and how likely they are to ask for help. Families sometimes score themselves as doing well initially. Then, when the assessor gets to know them a bit more, they discover that the family are far from fine, but that they are reluctant to face this and to request the support that could help them. Acceptance of help in advance of a crisis can be significant, but hard to ask for if the issues faced are already challenging.

Sometimes families score themselves 'fine', but are clearly coping with huge challenges with great resilience. This resilience can collapse if it is undermined by events, such as a carer falling ill, family bereavement or work pressures, etc. The Coping Scale can help to identify danger points and to put in contingency solutions.

The difference when bracketing the numerical value can give a great indication of areas where the team could support or judge whether the interventions were positive. These are not always mentioned by the family directly in initial conversations, but could be THE most important intervention we could make.

## Positive

- Helps PLWD talk about their concerns for their carer. (How are they coping?)
- Helps the carer talk about themselves and the problems they face,
- Unlocks hidden stories of difficulties that we struggle to find any other way.
- Helps familles face how well they are coping it can be revealing.
- The focus on what the next step up is helps set positive aspiration/ goal.
- Helps dispel assumptions of what good looks like, helps us LISTEN to the families vision of good.

## Negatives

- We lost our collaboration with OT (Due to Covid)
   the tool would benefit from some development with this team.
- It was a bridge too far to have those more involved and carry out delicate conversations during lockdown - we needed to focus on finding ways to get people urgent help.
- It was not appropriate to use it with ALL the families.
- · Some are too vulnerable.
- Some had started at pace, so we missed the opportunity to baseline.
- Online working changed the dynamic of our conversations. It is more difficult to soften the questions (if this is needed)

## Interesting

- The tool is still a prototype and potentially not quite polished enough. Needed more work.
- Need to work out when we want to run the assessments/measures, at 1 week, 1 month? 6 months?
- . Could we extend it to the wider carer network.
- Can this be self managed or is it always with a support worker?
- Can we try other metaphors for the visual scale?

## COPING Example

Gerry says that on reflection says he should have scored himself 4/10

Gerry was a bit emotional after the call despite his camaraderie,.. Said its made him realise all the things he cannot do. I'd put him at a 3 out of 10 also.

6 or 7/10 28th November

Gerry 6/10

24th September

Coping scale

5/10 28th November

Moira 3/10

4/10 28th November

Moira about Gerry 3/10

From Gerry's case study

## Alexa, Google + Portal resources

Voice Assistants have been used in 17 out of 40 use cases (TOC1 and 2) making them one of the most likely to be 'prescribed' products.

The Amazon Echo system, and in particular, the Echo Show 8 has particular value because of it's 'drop in', hands free, auto answer, video calling function.

We have extensive knowledge and experience of this system and we are beginning to understand more about comparable devices from Google and Facebook.

'How to' and various helpful resources have been created to help the project team and to support case study participants. Some of these resources are shown on the following pages.

For someone who does not have their own smart device.

You will need:

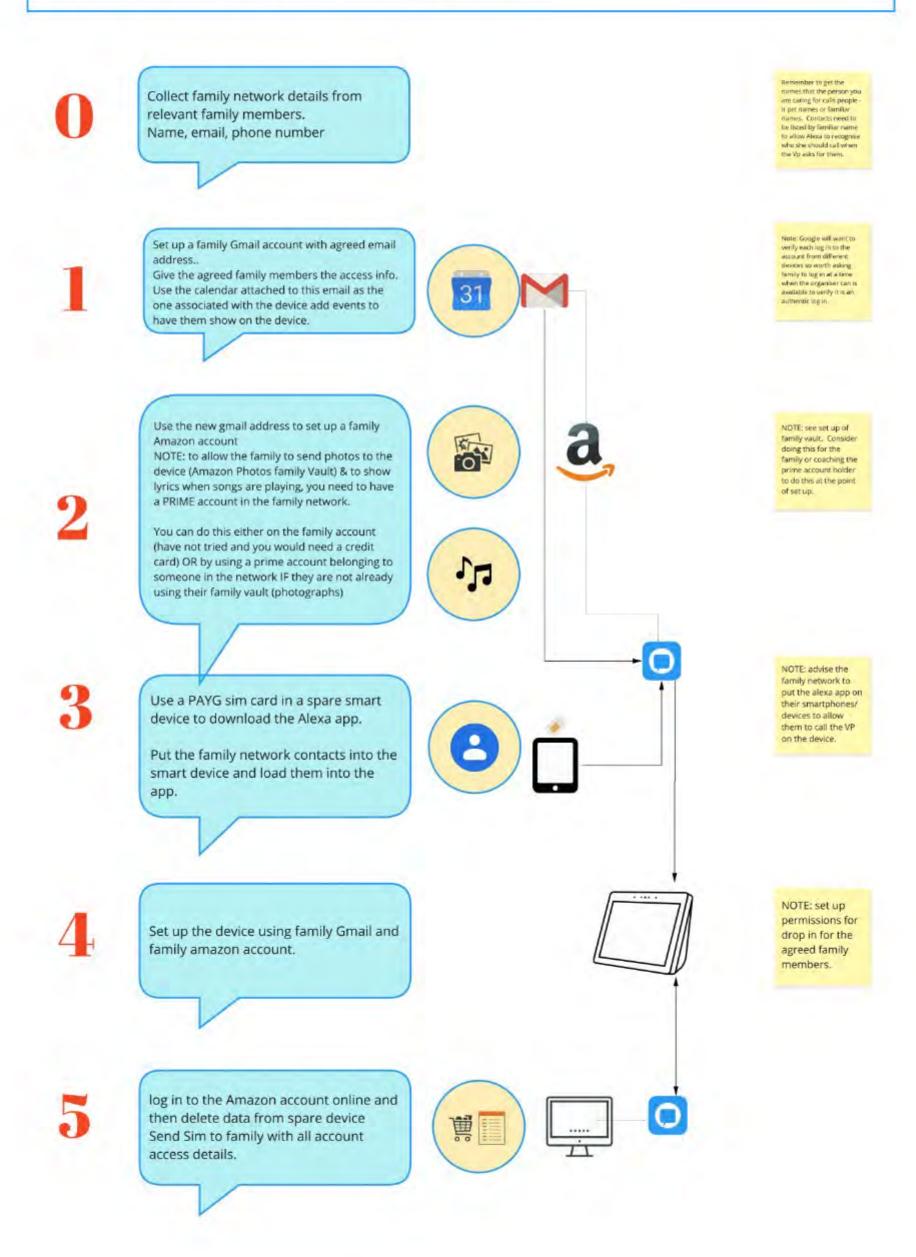
Family contact details (emails and phone numbers)

Spare smart device, phone or tablet

Pay as you go sim card

Amazon prime account (set one up or use a family member's).

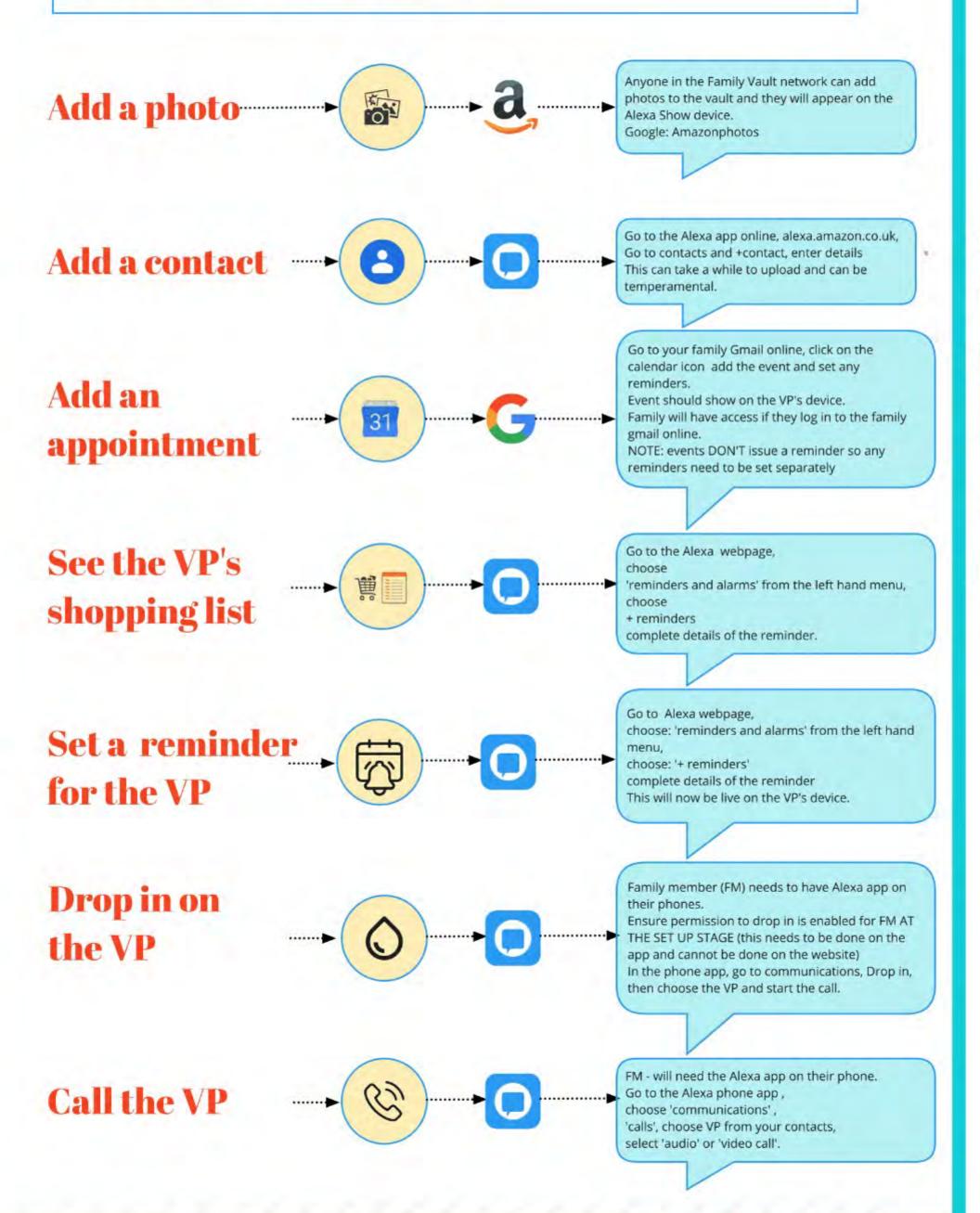
NOTE: VP= vulnerable person, FM = family member



## Family management

Working with the VP having NO smart device to manage the following tasks uploading family photos putting events in the calendar setting up reminders buying the shopping

NOTE: VP= vulnerable person, FM = family member



## Would be great if . . .

NOTE: VP= vulnerable person, FM = family member

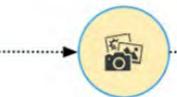
More than one Alexa Account could be managed from the one app.



This would allow a family member to set up a device for their VP separate to any existing accounts them might have. Particularly useful if the VP does not have a smart device.

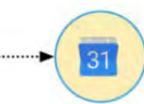
NOTE this would need a safeguard to let the user choose which contacts to sync. (otherwise all contacts will be synced to both devices.

It was easy to add names to photos



That the family could add names to the photos either on screen on in the app. This would help people living with Dementia keep the names connected to the faces of their family network.

Diary appointments had reminders



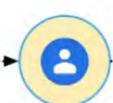
That any appointments put into the calendar on the device could be set to have a relevant reminder - so at a set time before the appointment there is an alarm potentially with a message - 'time to get ready for your doctor's appointment' here is a list of what you need to take:

Family Network could see the live shopping list



That nominated people in the family network could see the live shopping list of the VP, so that they can coordinate picking up shopping across several family members (without duplicating by ticking off the items they have picked up)

It was easy to add contacts from the Alexa web page



OR to hold 2 alexa accounts on the same app and be able to add contacts through the app. This would allow the family network to connect a nurse or doctor or new member of the family network to the VP's device if needed.

News CONTENT could be filtered



News can present a bleak picture, having a method to filter topics so that the VP is not distressed by items that are known triggers would be helpful. It would also be helpful to create a feed of topics that they enjoy, particular hobbies, sports or locations for example.

## "Alexa, how do you protect my privacy?"

In addition to visiting Alexa Privacy
Settings, you can also easily manage your
privacy settings by speaking to Alexa. Here
are a few things you can say:

- "Alexa, why did you do that?"

  If you ever wonder why Alexa

  responded in a certain way, just ask

  and Alexa will provide a short

  explanation about the response to

  your last voice request.
- "Alexa, how do I delete my voice recordings?"

You can delete your voice interactions by visiting Alexa Privacy Settings or by saying: "Alexa, delete what I just said", "Alexa, delete what I said today" or "Alexa, delete everything I've ever said".

 "Alexa, how do I turn off the microphones?"

To learn more about all the features that are designed to protect your privacy, such as ring-light indicators, microphone and camera controls, and wake-word technology, visit the Alexa Privacy Hub— our one-stop resource to answer all your privacy questions.

## M M M

## Setting up a reminder remotely

## On the Phone app.

You need to have an alexa app connected to the VP's device.

From the home page Choose: 'More' bottom right Choose: 'reminders & alarms'

Choose: 'reminders' (middle option)

Adjust settings to suit.

## On the Alexa web page 'alexa.amazon.co.uk'

Log In using the details of the amazon account connected to the device Choose reminders and alarms from menu on the LHS Set details of your reminder.

This will now be active on the VP's device

Alexa has a shopping list function.

Ask her to set up a shopping list then ask her to add items to the shopping list.

To share the list you can use the 'household' function but it is limited.

Household links the member's amazon accounts together through any devices that are connected to the accounts.

This lets both parties use any subscriptions you have associated with each amazon account (prime, audible etc). It also shares the shopping list.

## AMAZON says:

- · You're authorising the use of the payment methods associated with your Amazon account.
- · Your Amazon Photos are viewable on Echo devices with a screen.
- You hear notifications from all linked accounts.
- You're able to make and receive Alexa calls and messages on compatible devices for all linked accounts in your Amazon Household.

BE AWARE you can only have 2 adults in a household and if you leave a household you cannot join another one for 180 days. You can also only be a member of one household so set up carefully!

BE AWARE that creating a household gives access to the payment methods of the account holders so you can both purchase through the device.

This ONLY gives the 2 adults in the household access to the live shopping list though. the list will be live on the smart device so items can be ticked off once bought and update on all devices.

## EMAIL the shopping list as an alternative.

This is possible if you have the app connected to the VP's device on a smart phone or tablet. open the app, choose 'more' (bottom right)

choose 'lists and notes'

choose 'shopping'

choose 'share' top right

choose method of sharing - whatsapp, email, text etc from the smart devices options.

NOTE this list will not be live so items will need to be deleted from the shopping list either on the Echo show OR from the app on a smart device or from alexa on the web (Alexa.amazon.co.uk)

## Setting up a shared family calendar

Best done at the set up stage with Echo Show and requires the Alexa app on a smart device. Apple, Microsoft and Gmail calendars can be connected to the device, NOTE: the project team have worked with Gmail only.

## GMAIL

Set up a new Gmail address and give access (address and password) to this address to the family network. (this allows family network to see and add events to the calendar)

A calendar is associated with this address and can be viewed by anyone who has access to the email address online.

Use the new gmail address to set up an amazon account for the VP and this will connect the device to the calendar. There is no need to add a credit card to the account if not required.

ON the app, go to settings/ Alexa Preferences/Calendar & Email, Add Account - press the '+' button choose gmail, apple or Microsoft accounts. sign in and link the calendar of your choice to the device.

NOTE: Gmail allows you to log in and out of multiple accounts on one device letting you toggle between personal and family gmails when needed.

16 Million using Echo 14 Million using Google 2.6 Million using Apple



## Putting photos onto your own device

## 1. Using facebook

You can use Amazon photos OR Facebook photos

## To use Facebook

First, though, you need to connect your Facebook account to Alexa. So do the following

- 1. Open the Alexa app on your smartphone.
- 2. Tap More in the bottom bar
- 3. Select Settings.
- 4. Scroll down to Photos.
- Under Facebook, tap Link account.

You'll be redirected to a page where you'll need to log in to your Facebook account and give Alexa authorization to access your personal photos. To get them rolling on the screen of your Echo Show or Spot, do the following:

- 1. Swipe down from the top of the screen on your Echo device and tap Settings.
- 2. Tap 'Home & Clock'.
- 3. Then tap 'Clock'.
- 4. Tap 'Personal Photos'
- 5. Select 'Background'.
- 7. Then select the album(s) you wish to connect to

8. Tap 'Save' at the bottom of the screen and you're

Your Echo device will now show your Facebook photos in the background. If you want to change the clock face that's layered over the photos, head back to Personal Photos and instead select 'Clock Face'. You can also have Alexa show your photos in a rotating carousel by saying, "Alexa, show my photos" or "Alexa, show my photo albums".

## 2. Using Amazon photos

If you use Amazon's photo service, or at least have access to it, you can also use it to create photo slideshows on your Echo Show - but you'll need to create albums to do so.

To get this set up, do the following:

- 1. Go to the Amazon Photos site (make sure you're signed into the same account as on your Echo device).
- Select Albums > Create album.
- Drag and drop the pics you want into the album, then save it and give it a name.

Then, here's what you need to do on the Echo Show.

- 1. Swipe down from the top of the screen and tap
- 2. Tap Home & Clock
- 3. Then tap Clock.
- 4. Tap Personal Photos.
- Select Background.
- 6. Tap the Amazon Photos option.
- 7. Then select the album(s) you wish to connect to
- 8. Tap Save at the bottom of the screen and you're

## Sending images to someone else's device/ Sharing family photos

"If you are an Amazon Prime subscriber then you have unlimited photo storage for no extra cost. You also get what is called FAMILY

Family Vault allows you to share your unlimited photo storage with up to 5 people. They do not have to have Prime. In the Amazon Photos App you can upload pictures to the Vault which will appear on the device of . . . . anyone connected to the family vault."

I first set up Family vault (@ amazon.co.uk - using your prime sign in) and invited 5 people to join it.

When family members receive the invitation to join the Amazon family vault, they need to go through the sign up process before they can add images in to the vault. You will get a notification that they have accepted the invite

- 1. go to 'Amazon photos' @ amazon.co.uk (if not there already)
- 2. 'sign in' takes you to the photo management page
- 3. click Albums (menu on LHS)
- 4. click on the 'create album' rectangle
- 5. screen appears and suggests you click 'ADD ITEM TO ALBUM'
- 6. Click this, then go find a photo on your drive and drag and drop it onto the page that appears.
- 8. Once a picture is loaded you can tick it and a menu option appears top right saying 'add to album' 9. Click that and you can drop it into the FAMILY VAULT as an option.

NOTE: when you upload in image to amazon photos you seem to need to put it in an album before you can move it to family vault.

OR, once you have albums set up, you can use the yellow '+ADD' button that is on the menu bar at the top of the page next to the search bar to import the pictures. Again they seem to need to go into your personal album before loading to the vault.

Working on a phone seems allow you to add images straight into family vault.

NOTE: when you open family vault and email out the invites to your 5 people, you can select the images you want to add to the vault there and then and add them.

## FINALLY - to get the images onto the device

Remember to set all the devices you want to see the photos to have the 'Amazon albums' 'family vault' as the source.

- 1, swipe down from the top of the Alexa Screen,
- 2. on the far right hand side of the menu bar you will see the cog that represents 'setting', choose this,
- 3. scroll down the resulting list to 'Wallpaper and clock'
- 4. Amazon photos and the family vault should appear as an option,
- 5, choose it and your families images should then scroll as wallpaper on all the devices linked to that account.

## Adding names to photos

I can find no way of doing this within the Amazon or the Alexa app.

- 1. So I open an image on the Mac using preview.
- 2. Click the 'show markup toolbar' icon (pen in a circle) Use the [T] tool to write the name and then 'Save image as' . . . . (otherwise the text ends up on your original photo)
- then upload it to the family vault as above.





## How to:

HOW do we set up a playlist on the device for G? so that he can say - add to my playlist and it wil??

How do we get so onto spotify?

Can we listen to radio Clyde? Spanish club music

MUSIC

## Listening to Radio Clyde

Ask the google HOME hub device - "Hey Google play Clyde 1"

## Adding songs to a spotify playlist (From within spotify)

If listening on a phone you can tap the heart button next to the song listing. This will add it to your liked song playlist. We cannot find a way to do this using voice sadly!

If playing music through the hub you can ask it to save tunes to your liked music playlist by saying

"Hey google add this to my music on spotify"

To then play this playlist say

"hey Google, play my music" and it will play the tunes you have 'liked' with the heart symbol.

## Adding music to a spotify playlist (from outside spotify)

You need the music you want as an mp3 or WAV file on your computer before you start.

So if you can 'rip' the music from your CDs this might work.

- you need a computer with the spotify app downloaded (not the web app)
- · navigate to the settings within the spotify app
- · enable 'local files'
- restart the app (if you are on a PC apparently this helps refresh the settings)
- · navigate to the local files playlist on left hand side of the screen
- · add the song to your liked playlist by pressing the heart button
- · once the heart is filled green, the song has been added to your playlist.
- You can then add the song to a specific playlist (for example chilling out music)
- to do this click on the three dots next to the song listing and choose 'add to playlist'
- Then you need to download the playlist to your mobile device (button on top right of your playlist)



M would like to put photos from her phone onto the device.

## ADD PHOTOS TO YOUR DEVICE

## Method 1.

Use google photos (there is this facility attached to your google account) to set up an album specifically for the 'picture frame' capability on the home hub device. Add images to this album from your phone or computer using the google photos app.

In the google home app on the phone (connected to the device)

- · select the device from the home page
- Choose 'edit photo frame' from the options (can be accessed by touching the three dots icon top right)
- choose what you see on your screen when its not in use (is the message)
- · choose google photos
- · select the album you created
- · the images will then scroll on your device when it is not in use

## To add names/text to the images

- · on your computer, open the image in adobe acrobat
- · choose edit text and images from the top of the screen menu
- · choose the 'add text' option from the new menu that appears
- · place curser where you want the name to show
- · type name of person
- Resize or recolour the type using the options on the right hand side menu that appears.



CALLING (not 100% on this yet!)

## To call the device from a phone

The person calling needs to download the 'Duo' app to their phone and set it up. They need to be in the contacts that were set up on the google account for the device (I think)

Caller opens Duo, selects or searches for the person who is connected to the account, Duo then offers the option of a video call or a voice call or a message. Messages can be video, voice, photo or typed.

NOTE: both the phone of the person connected to the device AND the device will ring.

If YOU are the person connected to the device and you want to call it from your phone there is an option in Duo to call 'call your device' - again this is video, or voice.

## To call a phone from the device

Use a phone number -

"hey google call 01294 800000"

BEWARE! Google sometimes mishears the number - it will be displayed on screen before the call.

Use a contact - contact needs to be attached to the google account that is connected to the home hub device.

## To call between devices

From a google home to a home hub (different households)

Ensure the device you are calling is connected to someone in your contact list.

(you may need to set up voicematch on the home using the google home app,
go into settings, scroll down to 'set up or remove voice match'

follow instructions to set up your voice)

Ask the home device

Hey google call x (the person who is connected to the home hub device)

ALTERNATIVE - you can 'broadcast' to all devices connected to the home hub

MORE INFO NEEDED HERE!



Adding a contact

START

job 1.make sure you are working in the gmail account connected to the device at ALL TIMES. (if you have multiple accounts)

check that you device is using the same google address as your contacts.

Go in to your google phone app, tapping the circle icon top riget so show the address that connects to the hub.

https://support.google.com/contacts/answer/1069522?
co=GENIE.Platform%3DDesktop&hl=en

## The Hub uses contacts listed in your google account.

- 1. To add a new contact go to your gmail account,
- 2. in the top right hand corner there is a set of small dots.
- 3. click on this and you will see lots of google icons
- 4. You want this one
- 5. Use the '+create contact' button (top left hand side) and add the details for the person, give them a nick name that you want to use with the voice assistant. (ie Mum)

6.

add your contacts using the create contacts button on the top left.

Add a nickname (select show more at the bottom of the ad contacts page)

this is the name you will ask google for when calling

Save contacts from your signed-in devices is turned on. You can check it out on this link: <a href="https://myaccount.google.com/devicecontacts">https://myaccount.google.com/devicecontacts</a>

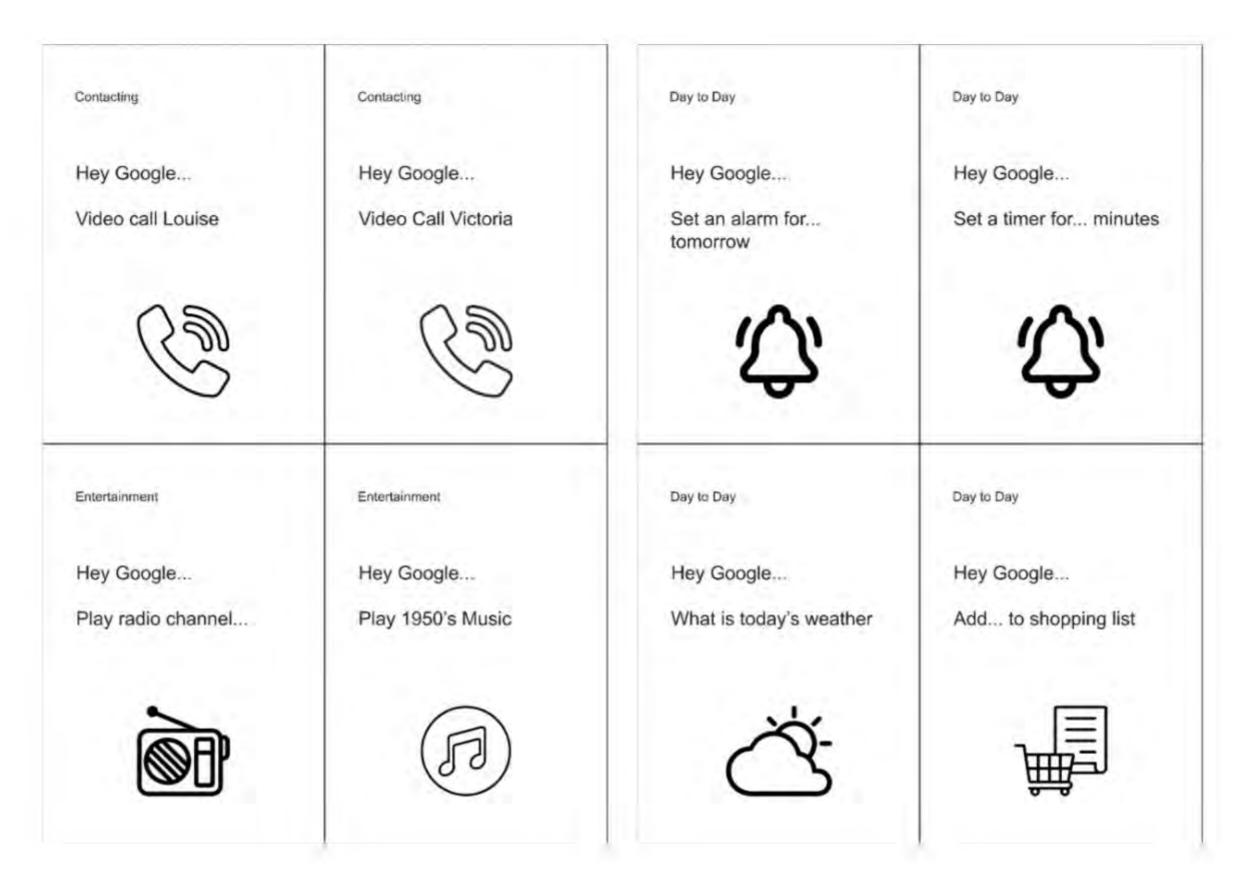
Here's how it works for Android:

- 1. Open the Google Home app and tap the account icon in the top right.
- 2. Tap Manage your Google Account.
- 3. Tap on People & Sharing.
- Tap Contact info from your devices.
- 5. Turn on Save contacts from your signed-in devices.

SEE the contacts you have listed on your device by saying "Hey Google, set up household contacts.", you can then choose the contacts you want to be able to call from the hub device from a list of all contacts in your google contacts app.







For someone who does not have their own smart device.

You will need:

Facebook account for the VP (a new one can be set up just for this purpose!)

Anyone in the care circle to be connected to the VP as a facebook friend

Family to have access to the VPs facebook online.

Amazon account (prime if you want to play specific songs and avoid adverts)

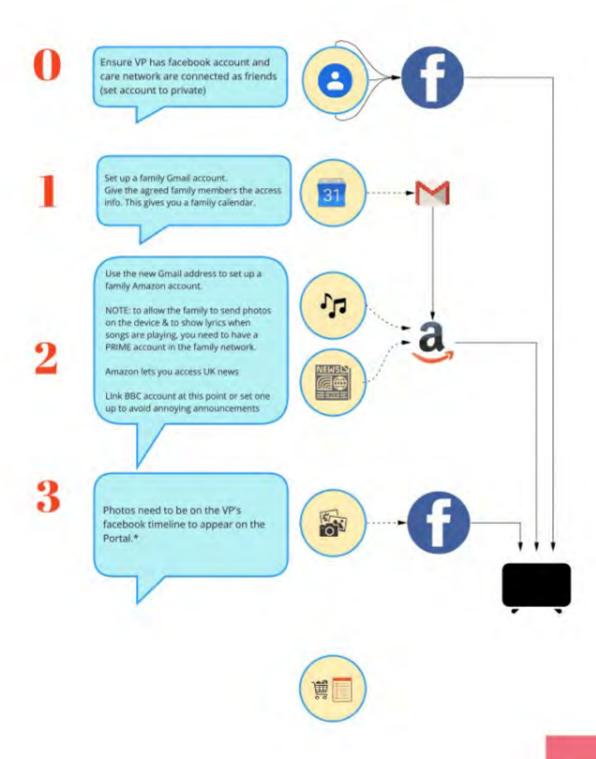
A device that can access the internet (to manage the Alexa account)

For the Alexa capability it is useful if:

Family set up a dedicated gmail account that they can share

VP has a BBC account to link to the device

(prevents annoying messages when asking for radio or news)



add the alexa set up here. (using PAYG SIM) Porta

## Family management

Working with the VP having NO smart device to manage the following tasks uploading family photos putting events in the calendar setting up reminders buying the shopping

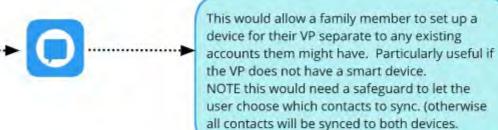
NOTE: VP= vulnerable person, FM = family member



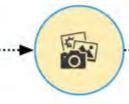
## Would be great if ...

NOTE: VP= vulnerable person, FM = family member

More than one Alexa Account could be managed from the one app.



It was easy to add names to photos



That the family could add names to the photos either on screen on in the app. This would help people living with Dementia keep the names connected to the faces of their family network.

Diary appointments had reminders



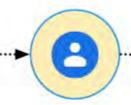
That any appointments put into the calendar on the device could be set to have a relevant reminder - so at a set time before the appointment there is an alarm potentially with a message - 'time to get ready for your doctor's appointment' here is a list of what you need to take:

Family Network could see the live shopping list



That nominated people in the family network could see the live shopping list of the VP, so that they can coordinate picking up shopping across several family members (without duplicating by ticking off the items they have picked up)

It was easy to add contacts from the Alexa web page



OR to hold 2 alexa accounts on the same app and be able to add contacts through the app. This would allow the family network to connect a nurse or doctor or new member of the family network to the VP's device if needed.

News CONTENT could be filtered



News can present a bleak picture, having a method to filter topics so that the VP is not distressed by items that are known triggers would be helpful. It would also be helpful to create a feed of topics that they enjoy, particular hobbies, sports or locations for example.

## How to make Phonecalls



You can call: Andy , Judith, Kenny, Chris, Sam, Iona and Jeni

We have created many resources to support us to deliver TOC2 and in response to COVID19.

The learning from this will help us to develop the Consumer

Technology Playbook and is part of a living and growing knowledge

bank.

We have established a pattern for engaging with users and a language that service users and staff at all levels are becoming familiar with and comfortable using.



## Digital Prescription

The 'Digital Prescription' in each of our case studies was unique and depended on what the person wanted to achieve; their aspirations, preferences and circumstances.

The table below shows a sample of the products that were considered and used. The products are mapped to themes, however some of the products are relevant to more than one theme, particularly the more complex devices, such as the Echo Show and Google Nest Hub.



## GPS decision support

## New grid

| Thinking about a GPS device? | How GPS location tracking works   | Common reasons people consider getting a GPS device.                                    | Some questions to ask yourself<br>before you get a GPS device.   | Next steps                                  | Good to know  | Suggested products  |
|------------------------------|---|---|--|---|---|---|
|                              | A GPS device can help you locate someone when they are out. They work by connecting to satellites to fix their position. Inside the home the satellite is not visible to the device and it will 'go to sleep'. When you leave home with the device it will 'wake up' and look for the mobile network. Most devices only 'ping' the network (mobile or GPS) when they are moving, therefore will not be visible in the home. This also conserves battery life. | Reassurance  I want to help keep the person I care for safe when they are out and about | O, Do they currently use a smlart phone or wasch? If<br>so, you may want to consider using the GPS<br>function their on existing device before adding in<br>something new.   | Use existing smart device                   | If the person has an existing device, such as a mobile phane or a smart watch then they are likely to have built in GPS functionality that you can use. This applies for Apple and Android devices.  Sometimes people have smart devices that no larger work well for them and they may consider getting a simpler device. There are still options that include the GPS function, if you want to consider this.   | Find myallows Apple users to locate the device of family and triends.  Life 360 allows location sharing through the Appliand notifications when the person arrives or leave a specified recation.  The Doro 780x is a simple mobile phone with GPS functionality. |
|                              |   | Future-proofing  I want to have something in place if needed                            | Q. What do they always take with them when they go out? For example, do they take house keys, wallet, mobile phane? It's really helpful to know this.  | Introduce new device with GPS functionality |   | responder service<br>2 way calling<br>SUS button<br>safe zones<br>falls alon  |
|                              |   | Crisis point I'm concerned about the safety of the person I care for                    | G. How does the person feel about having a device that can be used to locate them? For some people it gives them more confidence when they are out to know that they can get help if needed.  Others find it intrusive, or unnecessary.  | Other options                               | Could the person benefit from having a befriender to accompany there when they are out?<br>Do they have a Community Alarm in their home and could a door exit sensor be installed? See link to Telecarp.  | Purple Alert EIO Card Ownfone Telecare meetadam.co.uk door exis sensor Neos cameras, or Ring  |
|                              |   |   | O. Has the person given their informed consent?<br>Do they need support to make this decision?<br>If they don't have capacity are you able to make the<br>decision on their behalf?<br>Find our about Adults with incapacity and Power<br>of Attorney. See also, Rights, Risks and limits to<br>Freedom. |   | Sometimes GPS devices misreport location.   |   |
|                              |   |   |  |   | G. Who is monitoring the GPS2 There are 2 options here. DIY monitoring is offered with some devices and is generally a cheaper option. A family carer will need access to a smart phone, or other device that can access the management plactorm online. This is usually and App or Web address where you can see the person using the GPS device location and set boundaries and alens. If they don't have this then they should considerusing a managed service. This is where a responder service will call the carer on their phone if an alen is raised, if they don't have a smart phone, check that the calls are not vell; if family members do not the locally and carriot respond then a monitored service may be best. |   |

GPS locator devices continue to be among the most asked about technologies. During COVID we experienced an surge in interest from families who were supporting loved ones at a distance. In an attempt to scale the learning, meet demand, and help more people, we rans sessions with our Digital Champions and created this decision support tool (still in progress).

## Tell me about technology



Tell me about MyHomeHelper

1. Tell me what it is



2. Tell me why I would need it

3. Tell me one positive thing about it



4. Tell me one <u>negative</u> thing about it

5. Tell me something interesting about it

Seizing the opportunity that had been given to us with the uptake of digital in our staff teams, we have created a video series called 'Tell me about technology'.

The model is that of peer to peer learning, whereby staff who have knowledge of a tech device tell us about it and then pass the baton onto someone else.

We are already seeing the benefits of this in building knowledge and confidence.

## **BIBLIOGRAPHY, REFERENCES + LINKS**















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# face to face to digital

Our model of remote consultations following COVID 19 was presented as part of the Telecare Local Systems Pathfinders and was adopted by Local Government Digital Office (LGDO) in the Digital Telecare Playbook (template on next page).

## UNDERTAKING REMOTE CONSULTATIONS



## INTRODUCTION

In May 2020, Alzheimer Scotland undertook an online user consultation to get feedback on a new digital service called ADAM (About Digital and Me). ADAM is designed to help citizens identify the right technology to support their individual needs and is part of a CivTech 4.0 Challenge supported by Scottish Government's TEC Programme.

For the online consultation:

- · 35 people registered interest;
- · 25 people participated online;
- · Participants were divided into four cohorts:
  - People living with dementia;
  - Family carers;
  - Alzheimer Scotland staff;
  - Allied Health Professionals;
- . 3 channels Near Me, GoTo, MS Teams;
- 9 sessions were conducted over 4 days.

Moving from face to face engagement with service users, to online, was unchartered territory for us and a huge challenge at the time. The sessions we ran were largely successful. Some technical hitches of course, but people were forgiving and keen to persevere and contribute.

The feedback we received was constructive and useful. At times we were surprised by what people did and didn't find important, or in need of amending; showing that you can't second guess on behalf of other people. User engagement is important! We added these changes to the backlog and they were incorporated in the minimum viable product.

100% of those who participated said they would use the service and recommend it to others. We were satisfied that we had enough insight to validate what we had up to that point.

In August, we carried out a further five usability testing sessions online, to consolidate our learning. Meetadam.co.uk was launched on World Alzheimer's Day, 21st September.

In conclusion, I would say that what we have achieved is greater than launching one new product. We have established a pattern for engaging with users and a language that service users and staff are becoming familiar with and comfortable using.

## A FEW ASSUMPTIONS BEFORE YOU START

Before you launch into your consultation, it is really important that you have a clear idea of what you want to achieve, and how you are going to achieve it. Working through the following questions is an excellent way to plan for your consultation:

- Why you are doing this, what's the vision keep it jargon free, people won't engage if they don't understand what it's about;
- Who the stakeholders/users of the service are be inclusive;
- What your expectations are for the sessions be realistic;
- What you need to know/get insight into at this stage 3-5 asks, don't overwhelm people;
- When the sessions are happening be flexible, but timebox the activity;
- Where the sessions are happening agree best platforms.

## DIGITAL TELECARE

## PREPARATION

We reached out to people to ask for their help to ensure that the new service would have value and work for them and others like them.

Before we contacted people, we booked time in the diary, scheduled the sessions and created any resources that would be required e.g. forms, surveys, templates. We were then ready and able to give people information up front – no long gaps in contact where they could lose interest or change circumstance.

In Microsoft Teams, we created a registration form that we embedded the email we sent out. The form populated to a database on teams giving us the info we needed to schedule the sessions including: who should attend, availability, device to be used etc. "Is there anything we can do to assist you on the call?"

We put people together in groups of 2-10 and selected the most appropriate platform from three that we had been approved to use; Near Me, GoTo or MS Teams.

- Near Me was best for people with lived experience of dementia and carers in small groups of less than 6 including facilitators;
- GoTo was best for larger groups of carers;
- Teams worked better for practitioners;

We invited people via email, giving very clear info on day, time, format, numbers involved. In the email we provided links to call, joining instructions and troubleshooting and a consent form (Forms in MS Teams). A reminder was sent out the day before, again with all the links.

We prepared and did several run throughs to test things out. You won't be able to prepare for every problem technology will throw at you, but this will work out any obvious issues.

## TOP TIPS FOR REMOTE CONSULTATIONS

- Do introduce everyone and have time for chat we planned for 45 minutes but allowed for 60;
- Recording? Remember to ask permission;
- Be clear about what you want to achieve and make sure everyone knows what's going on and is happy;
- When things inevitability didn't go to plan, we either carried on as best we could, rescheduled, or apologised and thanked people for their time. No-one minds if you are good humored and polite;
- We found that doing 3 x 60 minute sessions in a day was challenging for the facilitators:
- · One person should facilitate and another take notes;
- . In selected sessions on Teams we ran polls to gather quick stats;
- · Let people talk and you listen. Ask "why?" Say "tell me more?";
- · Gently keep people on track;
- Have three things that you want to achieve and introduce these at the start, bring the conversation back round to them if you go off topic...."we said we'd agreed to look at these three things...";
- . Leave time for questions and to round up and say what happens next;
- Thank people for their time and input you can do this later in an email, but do it now in case you don't get a chance;
- Allow time to synthesize outcomes with co-facilitators a soon as possible afterwards.

# Thank you to all the participants who very kindly gave their time and efforts

The TOC2 team
Nicola Cooper, Service Design and Project Lead
Jeni Lennox, Consultant Design Principle
Alison Marshall, Project Reporting and Evaluation
Gillian Fyfe, Head of Digital Alzheimer Scotland
Ben McManus and Wavemaker for Technical Support
Tommy Petillo, Hannah Dunn and Kathy Wiles for Project Support
Scottish Government, Technology Enabled Care Programme

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