

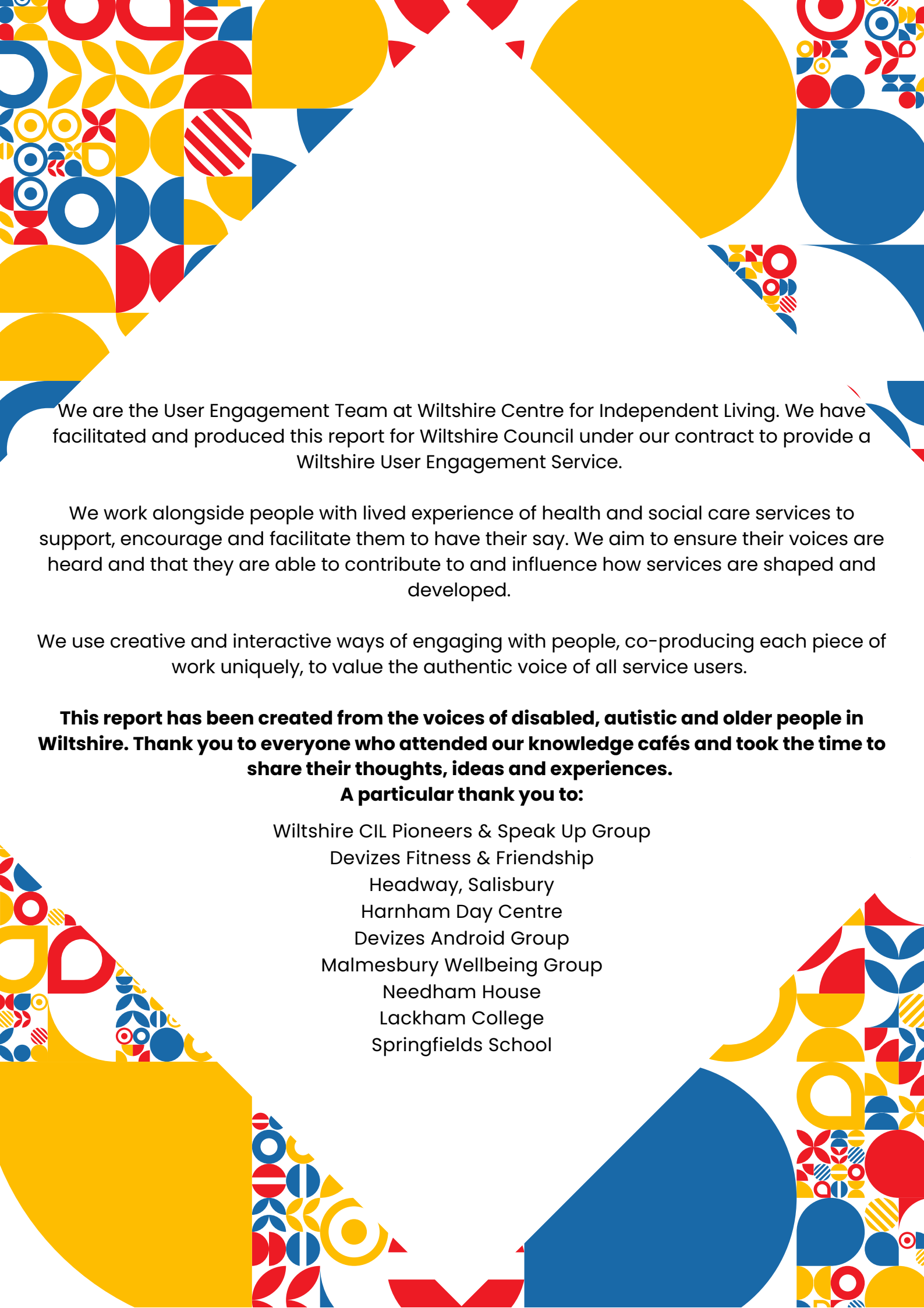


SPRING 2023

TECHNOLOGY ENABLED CARE

Exploring how technology can enable people to live their lives





We are the User Engagement Team at Wiltshire Centre for Independent Living. We have facilitated and produced this report for Wiltshire Council under our contract to provide a Wiltshire User Engagement Service.

We work alongside people with lived experience of health and social care services to support, encourage and facilitate them to have their say. We aim to ensure their voices are heard and that they are able to contribute to and influence how services are shaped and developed.

We use creative and interactive ways of engaging with people, co-producing each piece of work uniquely, to value the authentic voice of all service users.

This report has been created from the voices of disabled, autistic and older people in Wiltshire. Thank you to everyone who attended our knowledge cafés and took the time to share their thoughts, ideas and experiences.

A particular thank you to:

Wiltshire CIL Pioneers & Speak Up Group
Devizes Fitness & Friendship
Headway, Salisbury
Harnham Day Centre
Devizes Android Group
Malmesbury Wellbeing Group
Needham House
Lackham College
Springfields School



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Key Recommendations

During Spring 2023, we carried out a consultation exploring disabled and older people's views about technology enabled care (TEC). People shared hundreds of ideas, thoughts and observations but there were three key points raised in every single discussion - we call these

'The Big Three'.

Personalised

There is no 'one size fits all' in technology and care. The use of technology in care will differ for everyone. Packages and systems need to be designed to accommodate people's individual preferences, lifestyles and requirements.

Informative

People want more information and opportunities to learn about technology which could support them to live their lives independently. They want to be able to trial technology before deciding whether it will work for them.

Supported

Support needs to be available for those who want it at each stage of using technology enabled care; from choosing, to setting up, maintaining, troubleshooting and upgrading.

Methodology

We hosted a total of 12 interactive workshops, for disabled people, people with learning disabilities, autistic people, people with long term health issues and older people. Workshops took place in a variety of settings including colleges, day centres, support groups and community meeting rooms. Each workshop was relaxed and informal, with ample opportunity for discussion.

Central to each workshop were case studies created to get discussions going (See Appendix 1). We also created cards with images of many technology enabled care examples, and a summary of what they are and how they work. We talked through the different examples and whether they would help the person in the case study, any potential pros and cons and if there were alternative solutions to support independence.

Alongside our workshops we also hosted an online survey and a Facebook Poll on the 'Wiltshire Autism Forum'. The survey looked at the following three areas:

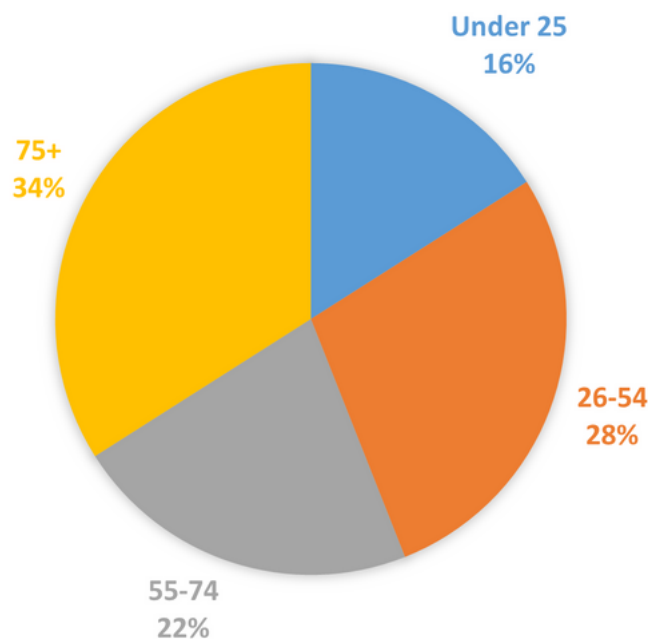
- *How people use technology and their confidence in technology.*
- *What limits people from using technology to support independence.*
- *What would enable people to use more technology.*

Demographics

109 people took part in the workshops and a further 18 completed our online survey and 14 people participated with the Facebook poll. This makes a total of 141 people who took part to share their views.

41 males and 68 females took part in the workshops.

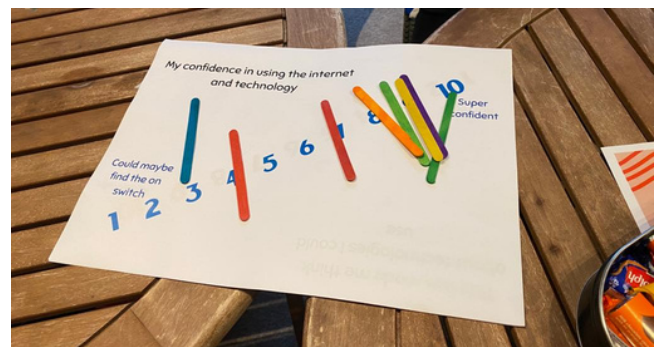
16% were aged 25 or under, with a further 28% aged between 26-54 years, 22% between 55-74 years and the remaining 34% being aged 75+ years.



At the start of each session, we asked people to rate how confident they feel in using the internet and technology on a scale of 1 to 10, with 10 being the highest.

There was a very slight trend of the 55+ year group expressing lower confidence.

However, across all ages there was mixed confidence with the oldest and youngest workshop participants rating an average of 5.6 and 6 respectively.





The Big Three

Personalised • Informative • Supported

Personalised

Choice

People want to have choice and control over their lives, and this is no different when discussing care and technology. Many of the people we spoke to were very positive about technology and the impact it could have on their lives. When asked to rate on a scale of 1 to 10, the average rating to the statement "I would like to use technology more" was 7.2. Likewise, the average rating of "I can see how technology can enhance independence" was 6.3. This shows that for many there is a desire and appetite to use technology in our daily lives.

However, this was not necessarily across the board. A notable number of people did not currently use technology, and did not want to use technology in the future.

"Some people will not like technology and it shouldn't be forced on them. You should have a choice, it should be an option rather than compulsory."

"My elderly relative was quite daunted by technology. By the time we get older I think we will use it more as we are used to it already."

Some people were concerned that technology would be a detriment to their independence, rather than enhance it.

"I don't want technology to stop me doing things myself and staying active."

Some people reflected upon care assessments that they had had in the past and reiterated the importance of choice and control, especially when discussing care and support.

"Someone came in and said what they wanted to do but no-one asked what I wanted. I wish I'd been given a list, I could select what works for me."

"We should always be asked what we want rather than bombarded with everyone making decisions for you."

Different Needs / Different Lives

Framing the discussions around case studies gave people the opportunity to consider how technology could support people different to themselves. Through these conversations, people drew similarities and differences between the case studies and their own lives. These observations led to people explaining that technology enabled care needed to be personalised to suit each individual person and their lives – a 'one size fits all approach' would not work.

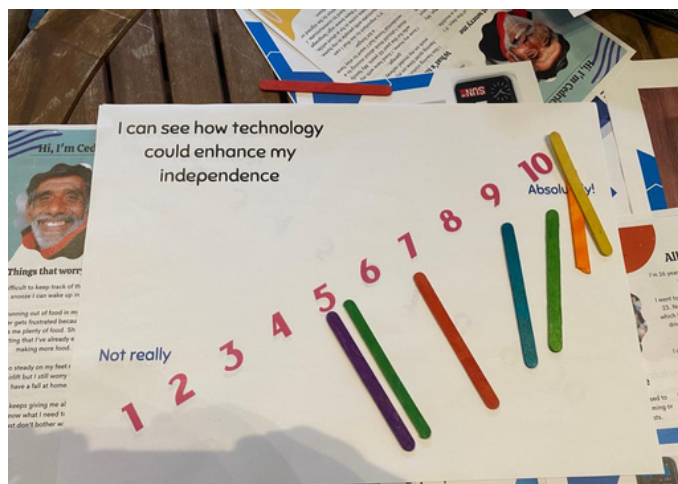
"Everyone is different and their use of technology varies. The care assessment needs to be personal."

Some people said that the need for personalisation goes beyond care needs, but should incorporate people's preferences and lifestyle.

"The preference of the person needs to be properly talked about. You need to ask what they want."

"Even if the perfect piece of technology existed for someone, if they don't want it then they shouldn't be forced to use it."

"Find a solution that links to your interests, like gamifying tasks."





The Big Three

Informative

Sharing Information

A key theme that emerged in our discussions was that at the moment people did not think there was enough information available about technology which supports independent living. Whilst some of those we spoke to were well aware of the technology available to them, for others they had no idea such technology existed.

"I don't know anything but I want to. It's tricky to know where to go."

During the discussion we asked people where they would go to find out about technology.

"I'd go to libraries to find out information."

"Health services might be able to help on technology that is health based."

"Some people rely on their family to help. I don't have any family so I don't know any of these things."

"It's word of mouth, people need to talk to each other about it."

People then talked about how they would like to learn about new technology and three distinct ideas emerged. Neither idea is a complete solution, but rather they should be used together to complement each other.

Independence Showroom

People wanted a physical space that they could visit and try out the different types of technology available. This showroom should show a range of different options and different pricing, all with an emphasis on independent living. It should be located in Wiltshire and be easy to arrange a visit to.

"We need an IKEA style show room for smart technology, where you could walk through a house and see it all demonstrated."

"It's really important to have somewhere you can go and look at these things."

"I want to try beforehand so I can see if it will be helpful."

The Big Three

Community Expert

People said that they wanted someone to bring technology out into the community and demonstrate it in accessible places. This would support people who are unable to visit a central physical showroom. Furthermore, this would reach people who are not aware of the technology available and wouldn't necessarily seek out a showroom.

"You need people out and about in the community to show and demonstrate technology. Like someone who can come to residential homes and supported living."

"We need someone to come and show us how it all works and have a go."

Online Information

For people who already use some technology and the internet, it was deemed important to have good quality information online. Some people said they would like a website which describes and demonstrates some of the technology on offer with an emphasis on independent living.

"Some people might be able to look stuff up, you need a place online which advertises this stuff in one place."

"When companies advertise this tech there is always an emphasis on entertainment, rather than how it can support independence. There needs to be more information about this online."

Case Study - The Smart Flat

Warrington Council and Disability Partnership launched a smart flat display home in 2018. It has a display bedroom, living room and kitchen. It enables people to try a range of TEC including smart speakers, talking eye glasses, medicine dispensers, and talking clocks.





The Big Three

Trial Period

Some people shared that they would like the opportunity to trial technology before committing or investing in it. This is especially important when considering technology enabled care because people may not know if it will work for them until they are able to try it.

"If the council are going to invest in this then they need to make sure people can use it. Why not have a trial period where people can try some tech for a few weeks before they decide if they want it so it doesn't go to waste."

"The problem is I want to see this all first, especially if they are expensive. If they won't loan or demonstrate it then I won't buy it."

The Power of Conversations

Another thing that became apparent throughout our discussions was the impact that simply talking about technology can have. At the start of each session, we asked people to rate on a scale of 1 to 10 how confident they felt using technology and the internet. We then repeated the question at the end of the session. The average rating at the start of the session was 6.47 and by the end of the session is was 7.56. By simply talking about technology, people gained confidence in using it. This trend was true for every session we ran. The discussions also proved beneficial for people who already knew about technology but needed a bit more confidence to go ahead and use it.

"It's made me realise that I need to get my backside into gear to get these things in place. It's the little things like being able to turn the lights on and off by myself. Even the little things can make a big difference."

"My confidence was already high but this discussion has increased my awareness."

List of TEC

Many people shared that they felt it would be beneficial to have a clear list of technology that people could pick from. This list should be simple and transparent including information such as, how it can support someone, the cost, whether it can be funded, where to purchase it and what ongoing maintenance may be needed. Equipping people with information enables people to have more choice and control over their care.

Support Throughout

Many people discussed the importance of good support throughout the process of choosing, setting up and maintaining technology enabled care at home.

Making Choices

Some people expressed that they would like support when making choices about technology. This was particularly important for people who didn't have much knowledge or confidence in technology, or found it difficult to make decisions.

"I research all the options heavily to the point I become overwhelmed and can't decide. It helps when I have a deadline or something to tip me over the edge for making the decision. Having a reduced set of options could help rather than having all the options. Left to my own devices, I wouldn't make any decisions."

"Decision support would really help me. Some mentoring to upskill myself into how to make timely decisions."

"Knowing what to buy and getting somewhere you can see what to buy."

Set Up

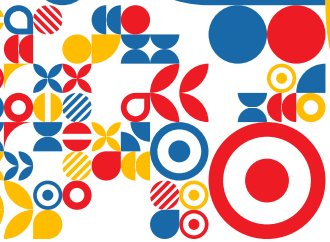
Some people said that they would need support setting the technology up. This included people who were not familiar or confident with technology as well as people who need physical support installing the equipment.

"I have a ring doorbell which means I can answer the door independently. But I needed my wife to set it up for me as I can't physically do this myself. If it wasn't for my wife I wouldn't be able to have the doorbell."

Maintenance and Troubleshooting.

The largest area in which people wanted support was in maintaining technology and fixing it when there are issues. This is especially important when you are relying on technology to live independently. As such, people felt that there should be a tech support service provided alongside technology enabled care.

"In general with technology you're going to have to put resources into sorting out what happens when it goes wrong, such as updating payment information when cards expire. You need to be able to deal with the exceptions and offer full support. That's not just a 9-5 job. You need 24/7, long-term support."



The Big Three



"When the internet goes down you need a back up plan - that's the risk we are taking in using technology."

"We need low-tec back-up options which isn't dependent on power and wifi."

Some people felt that whilst they might not need support from a person, it would still be a good idea to have a back up plan in place in case technology stops working.

"It can feel a bit scary to put all your trust in technology when it could stop working. I would like a plan of what I would do if the internet went down or the power went out. That way I'd feel more prepared."

Some people noted that some modern technology does not come with paper manuals which makes it difficult to troubleshoot and fix technology when it breaks down.

"You just can't get manuals for things nowadays. You have to google to find things out which can be a barrier."





Additional Thoughts

Alongside 'The Big Three' there were many other thoughts and ideas raised in our discussions, some of which resonated with many people.

Tech VS People

When discussing technology, some people were concerned that it would be used to completely replace human care. In general, people did not want this. Instead technology should be used to complement and enhance existing care. Some people worried that using technology would mean people missed out on social interactions with carers.

"If everything goes over to the internet, you miss out on social interactions."

"I don't want my care being taken away."

"I need a person, not a thing."

However people could definitely see the merits in using technology especially when used to complement human carers.

"My parents are getting older so relying on technology for support might be better."

"I would prefer to stay in my home with carers and the help of technology."

"In the future, robots will be getting you up and wiping your arse."

Another concern some people had was how the use of TEC would affect other benefits and care hours.

"I worry about my PIP because if I can do things with technology, they are going to mark me down. They don't care how I do it, only that I can do it. But when the internet goes down or breaks, I'm left with no independence."

"I don't want to have my care reduced because of TEC."

Cost

In general people perceived technology to be expensive. When discussing the different types of technology, cost was the most common concern that people had.

"Cost is a big barrier to getting the equipment that would enable me to be more independent and I don't qualify for any grants."



Additional Thoughts

"It must be incredibly expensive to turn your home into a smart home."

"You think twice before you get technology because of the expense."

Whilst technology can be expensive, some people were surprised when we shared the cost of some of the cheaper technology such as smart plugs and smart light bulbs. This reiterates the importance of sharing accurate information with people so they are well equipped to make their own decisions and choices.

Some people could also see the merit in investing in technology in the long run.

"With a bit of technology, some people will be enabled to stay in their own home and be independent. This will save money in the long run. The cost of the TEC will be less than paying for a residential home."

Trust

Another point for discussion that people raised was whether they would trust technology. In general, some types of technology were trusted more than others.

People were more cautious towards technology which impacted someone's safety and wellbeing such as smart door locks and automatic medication dispensers. Generally, technology which relied on an internet connection was seen to be less trustworthy and reliable. Levels of trust strongly interlinked with people's confidence and familiarity of technology. Generally people who were familiar with technology trusted it more.

"I wouldn't trust myself to use internet banking. I just don't feel confident enough do it."

"Social media can cause increased risks of mental health problems. Such as increased rates of anxiety amongst people using instagram, child grooming and depression."

However many people acknowledged that regardless of their individual feelings, *"using technology is the way it's going."*

"I accept that these things are going to happen and we need to go with it."

"Technology is going forward and it's brilliant when it works but I'm skeptical."



Additional Thoughts

Simplicity

In general, people looked for simple solutions to independent living. In many situations technology may be the simplest option, but there are occasions where it is not. People thought technology should not be used for the sake of it, but only if it is helpful and what the person wants.

"There are sometimes low-tec solutions like pulley systems which may be easier [than automated doors]. However for these you need the knowledge and practical skills to set these systems up."

"I prefer to use a whiteboard [than reminder apps]. My family use a whiteboard at my house."

"Some gadgets are fine, but having a lot can be overwhelming."

In addition, some people raised concerns that technology can be difficult to learn, especially if you have not used much technology before. This concern was raised slightly more by people aged over 75. However, there were still many older people who were very familiar with technology, or were keen to learn more about it.

"I used to use technology but I haven't used it for a while so I've lost all those skills."

"I don't think people who have never used technology will be able to."

"People forget that we are older and we can't learn all new things."

"Passwords drive me mad."

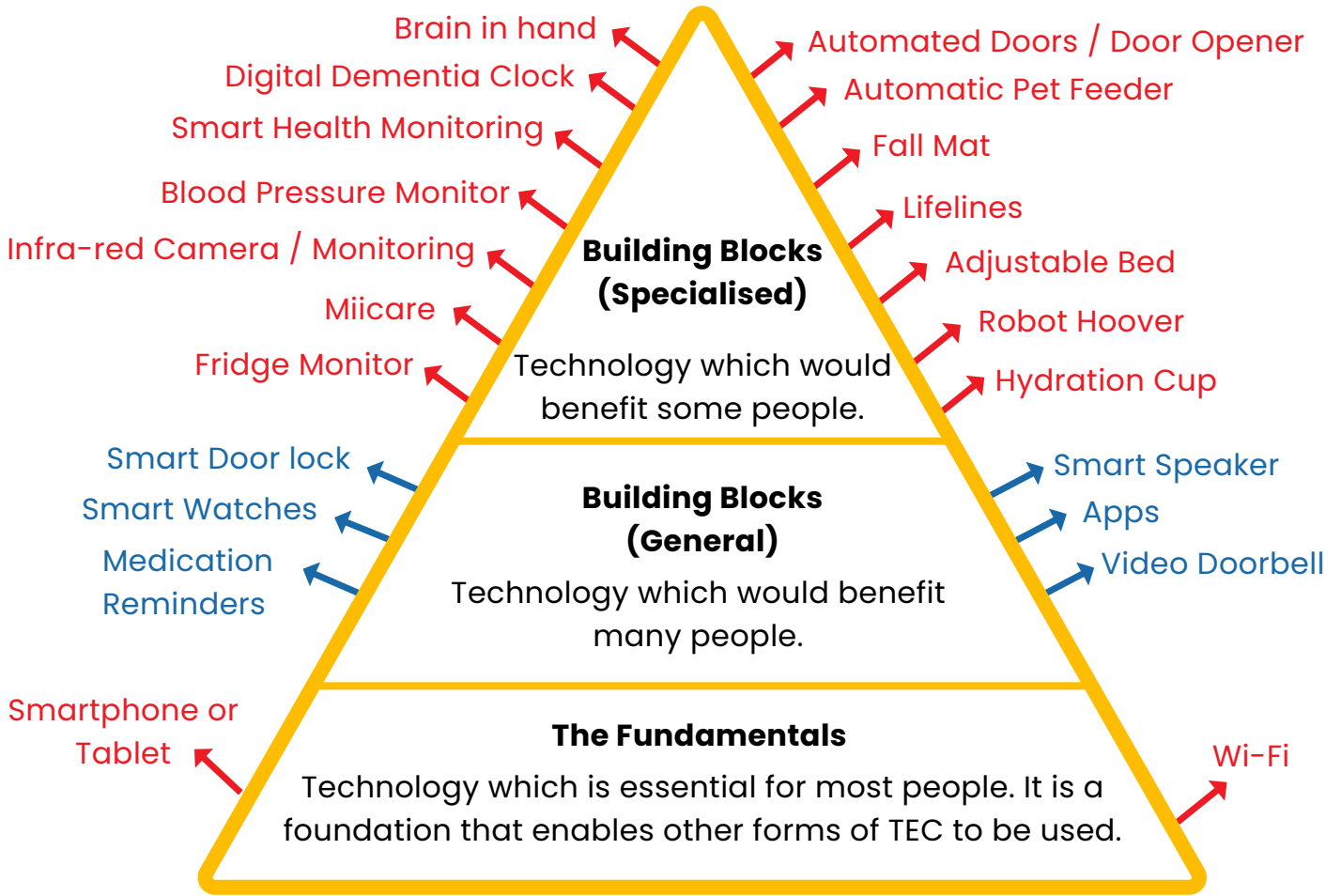
"computers are invaluable for shopping, banking, prescriptions"

"My mobile phone is my lifeline as I live alone. I also use it to remind me when to take medication. I use it as a reminder for any important events that I could easily forget. I also use the internet for much of my shopping both day to day and regular supplies"

Types of Technology

During the sessions, we introduced people to a wide variety of technology. People were asked to consider how helpful they thought each piece of technology would be at enabling independent living. From these discussions, we were able to categorise the technology based on how essential and helpful people deemed them to be.

These are:



The Fundamentals

During our discussions, two items of technology were identified to be 'The Fundamentals'. This means that most people who wish to use TEC would benefit from this technology. This does not mean everyone would benefit from it, as choice should still play an important role even in The Fundamentals of TEC.

Wi-Fi

When discussing the different types of technology, people quickly pointed out that for many of them to work, they need to be connected to wi-fi. People considered wi-fi essential in enabling other forms of technology, particularly smart home technology such as bulbs, doorbells and locks. These types of technology will be discussed later in this report.

Some people had reservations about wi-fi, primarily due to the cost of it. This is particularly significant since it is estimated the average disabled household already faces £975 a month in extra costs (Scope –The Disability Price Tag, 2023). Therefore some people will not have the income to pay for a wi-fi contract.

An additional challenge for consideration is the rurality of Wiltshire. There will be limitations to what wi-fi services people can receive, particularly for those who live in small villages and rural areas. Not everyone in Wiltshire will have access to sufficient internet bandwidth to use smart devices and technology in their home. According to Ofcom Connected Nations report 2022, only 39% of households in Wiltshire have the infrastructure to access full fibre connection. The uptake of full fibre in Wiltshire is even lower than this. In comparison, 77% of households in Swindon and 59% of households in Bristol have access to full fibre. This demonstrates the importance of personalising TEC services to the individual as even when compared to nearby local authorities, there are distinct differences between what people can access.

Smartphone / Tablet

Many of the people we spoke to already use a smartphone or tablet. The most common uses of these devices were for entertainment and games, staying in touch with friends and family and using social media.

"All us girls get together on Zoom from wherever we live."

"I talk to my friend in Canada every week on my tablet - it's easy to use."

"I use it to do my social things."

For some people, using a smartphone or tablet goes beyond this and is an integral part of their lives and independence. Furthermore, some people shared that their smartphone enabled them to use other forms of technology such as, apps, online banking and smart home devices.

"I use the IPAD for my calendar, weather, photos and music. I have my speech therapy app and Mum can add to my calendar for me."

"I use online banking. I wasn't very confident to start with but the bank showed me how to use it so now I do it all the time."

"I do everything on my IPAD, I would not be without it."

"I use my phone constantly, for reminding me of medication, answering the door, even turning my lights on and off."

Some people did share concerns about smartphones and devices. The most common concern was that people would need support setting them up and fixing them if something went wrong. In addition, people were unsure where they could go to learn about smartphones / tablets.

Case Study – Warminster Tech Club

Warminster School signed up to Wiltshire CIL's #MakeSomeoneWelcome campaign and pledged to run a 'tech club'. Through the club, students support people in the community to learn more about technology.



"How do we learn about these things? I'd like to do online banking."

"They are frightened by things like smartphones and tablets because they are afraid of getting it wrong. It needs to be a product that has a very clear and simple user interface."

"I wish I could do email but I don't know how to. I need it explained to me."

"I'd like to have a go and learn even the basics."

Another reservation people raised was the need to have a wi-fi connection to get the most out of a smartphone and tablet. Some people also raised concerns about the cost of smartphones and tablets, however others had found them cheaper than they had expected. This perception reiterates the importance of having access to accurate and easily accessible information on technology.

"I used to have a landline but it got cut off, so I went to the phone shop and got a mobile phone. The phone shop set it all up for me at a fraction of the price of the landline."

Although many people could see the benefits of having a smartphone, some people simply did not want them. A few people were concerned about online scams, particularly with regards to online banking. Whereas others simply didn't see the need for one in their lives. Some people preferred the idea of a smartphone as it was more portable whereas others liked tablets more because they have a bigger screen which can be easier to use. These differing opinions highlight again how important it is for people to have choice and control in choosing TEC.

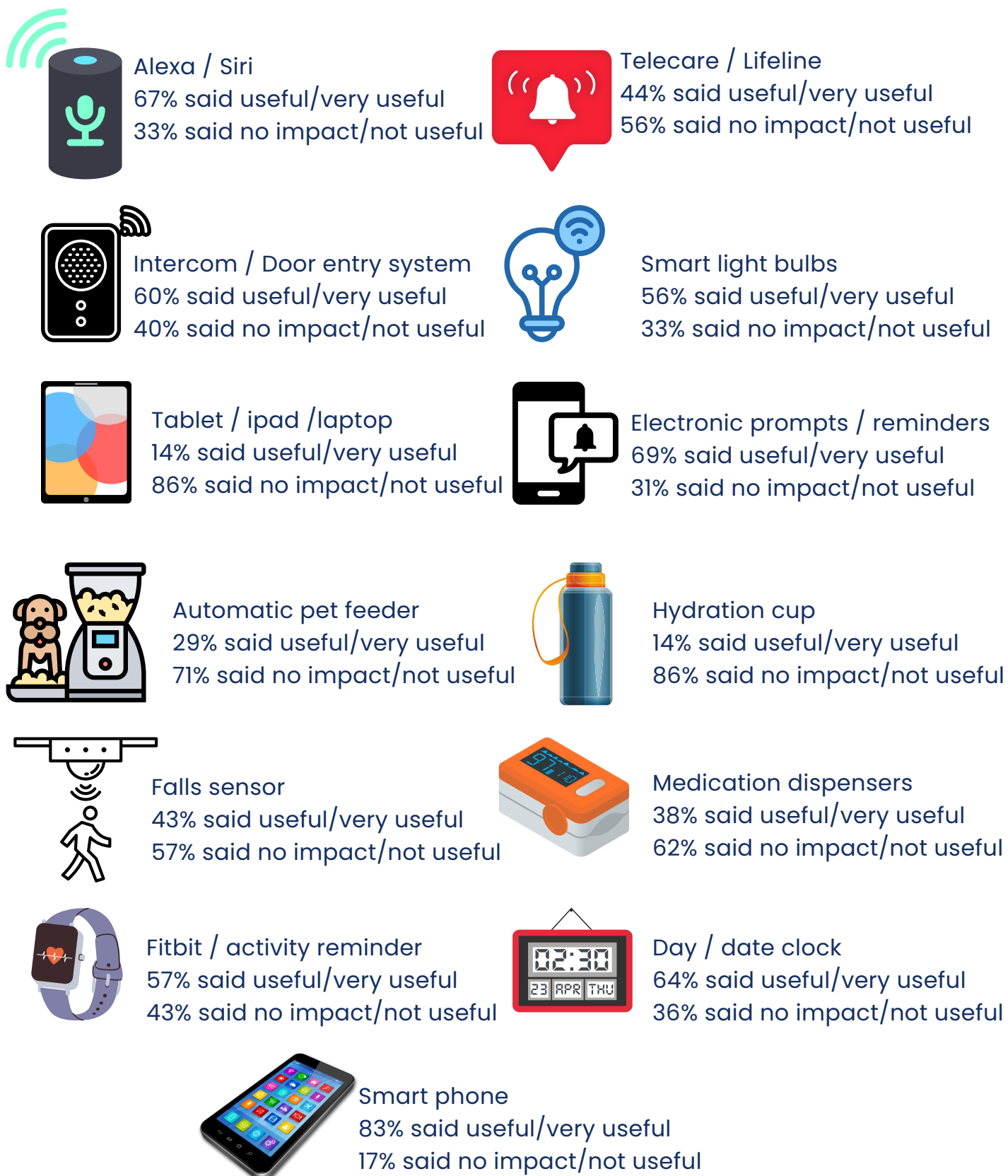
"I had a mobile but I got rid of it as I didn't use it enough."

"I don't trust online banking."



Usefulness of different technologies

As part of our online survey, we asked people to rate how useful, or otherwise, they found different technologies.





Building Blocks -General-

People identified that some types of technology would be beneficial in supporting many people to live with greater independence. These have been categorised as '**General Building Blocks**'.

Smart Speaker (Alexa / Google Nest)

Most people had some awareness of smart speakers such as Alexa or Google Nest, even if not everyone was fully aware of their capabilities.

"I've heard of it but that's about as far as it goes."

People believed that a smart speaker could be beneficial in many different ways, the most common being to call for help in an emergency and to tell you useful information. Other uses included setting alarms for medication, to tell the time, to contact people and to play music.

Many people also talked about how smart speakers can integrate and enhance other forms of technology such as smart bulbs and smart heating.

"It's good for company and reminders for taking medication."

"[My friend] can't get out of bed so she relies on Alexa for everything. She calls people on it and does her shopping."

Some people felt they did not want a smart speaker, or would be unable to use one independently. Most commonly, people were concerned about it feeling intrusive. Others said they would need support to set it up. A small group of participants who use assistive speech devices explained that the smart speakers do not work with their form of communication.

"I don't like the idea of someone listening."

"I'd like one but don't know how to use it."

"I have one but it's in a drawer keeping my smart meter company."



Smart Bulbs

Many people saw the benefit in having smart bulbs, that are either voice, motion or remote control activated. In particular people felt they would be beneficial for people with mobility difficulties, especially for lights in difficult to reach positions like table lamps.

"I have one in the garage. It's useful because I can put the light on before I go out there."

"We have a remote control light - on/off and can adjust the light levels. Helpful to have in the bedroom and the remote is handier than the switch."

"Almost every bulb in my house is a smart bulb. I set it up myself and manage it. I just needed someone to screw it in."

The most common concern was the cost of smart bulbs, many people felt they would be significantly more expensive than regular bulbs. People were surprised to learn that smart bulbs can be purchased for less than £10. Some people raised the issue that other forms of technology, such as a smart speaker, may be needed to fully use the bulb. Finally, people were concerned about what would happen if the bulbs needed resetting, or if the wi-fi went down.

Video Doorbell

Continuing along the theme of smart home technology, we discussed video doorbells and whether they can support independence. The most popular benefit people gave for video doorbells is the ability to communicate if you can't get to the door. People generally felt safer with a video doorbell as they could see who was at the door. Some people thought they could be used alongside other types of technology such as vibration pads or a light response to make it more accessible to them.

"My wife wasn't well and I had a delivery so I was able to ask them to leave it at the door."

"If the door goes and I'm upstairs it can take a long time to get downstairs on my stairlift. My doorbell allows me to look at who's at the door and talk to them."

In our discussions, it was clear that whilst a video doorbell would be useful for some, it would not suit everyone's living situation. Most notably, people who had communal or shared entrances such as in flats or supported living homes.

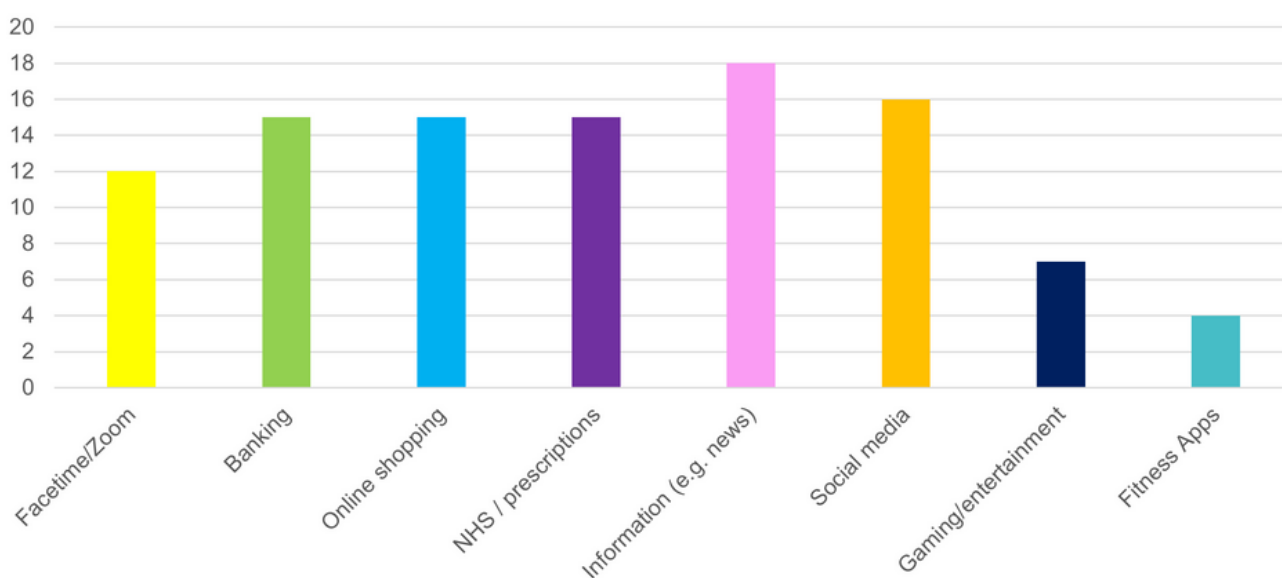
"If you live near the flat entrance it would go off all the time."

The most common concern people had about video doorbells was the cost; both initially and the ongoing subscription cost if using a service like 'Ring'. Some people said they would need support charging the doorbell and connecting it to other devices in the home. A few people felt a video doorbell was intrusive to neighbours.

"My neighbour has one but it feels intrusive and I don't like them seeing my comings and goings. I've changed my behaviour because of this."

Apps

Many of the people who shared their views currently use apps, or would like to use apps in their day to day life. As part of the online survey we asked people what types of apps they use. The results are represented on the graph below:



During the workshop discussions people also shared many different apps they use in everyday life. The most popular uses were social interaction apps such as video calling and social media. Others used apps for practical uses like medication reminders and checklists.

"Without my phone I wouldn't function at all. Every reminder I need, where I'm going and what I've done. It reminds me of all my medication. Google Keep is where I jot down all the things I need to remember. I have a check list I tick off all the things I need to remember."

"I do online shopping, communicating with PAs - shifts, tasks etc. Bills / banking. My friends 'live online' so social. I volunteer online."

Medication Reminders & Dispensers

Leading on from our discussion of apps, we talked about other types of technology which remind people about medication. Some people liked the idea of a reminder clock whereas others preferred the idea of a smart watch which could deliver reminders. A few people said they would prefer a person reminding them rather than technology.

"A medication reminder doesn't give you the human connection - you may want it sometimes but not all the time."

One such solution is a medication dispenser, which dispenses the required medication at certain times throughout the day. Many people thought this could be beneficial with the key benefits being that it is simple to use and can help organise medication, particularly for people with memory issues.

"I drop things a lot so a pill dispenser would be good."

Some of the people in the discussions already used a dosset box which they either received from the pharmacy or filled up themselves. Many of these people were happy with this solution but some people saw the benefit in a technological dispenser.

"Sometimes even a dosset box doesn't work because it can get confusing, so a locked box might be simpler and it can't go wrong."

"I have a dosset box which the pharmacist makes up which is very helpful."

The main issues people raised around medication dispensers was the need for support to fill them up. Furthermore people raised that it would not necessarily work for all medication types, such as liquids or creams and would be difficult to use if you weren't at home.

"I wouldn't trust them because I want to know what I'm taking."

"What if it dispensed onto the floor rather than my hand?"

"What happens if you miss a tablet and who will fill it up?"

"I have a pill dispenser, it's not automatic but I fill it up every week. It's a pain to fill up but it's worth doing."



Smart Watches

The next technology solution we discussed was smartwatches. People perceived that there were three main ways in which a smartwatch could enable independence:

- *Safety* - With a smartwatch you can call for help if you need assistance. Some smartwatches also have fall detection, which will alert an emergency contact if the watch detects that the wearer has fallen. Some people thought this was a good alternative to a pendant alarm.
- *Reminders* - As already mentioned, some people use their smartwatch alarms for medication reminders. As the alarm is attached to you it is convenient whether you are at home or out and about. When connected to a smartphone, some smartwatches can also send alarms from continuous blood glucose monitoring systems. This highlights another way technology can promote independence and control over health and wellbeing.
- *Fitness* - Some people felt the fitness features available on smart watches would support their independence. This included heart rate monitoring, calorie counting and reminders to move.

Some people felt that there were some limitations and barriers to using smartwatches:

- *Requires a smartphone* - The vast majority of smartwatches need to be linked to a smartphone to work fully. This again reinforces that a smartphone should be considered fundamental in technology enabled care.
- *Usability & Size* - Whilst some people saw the small, discreet size of a smartwatch as a benefit, for others it is a limitation. Some people felt they would have difficulty reading the size of the display, or would not have the dexterity to use the watch. This highlights that not every solution will work for everyone and a personalised approach is needed when introducing technology.

Smart Door Locks / Openers

The final type of technology we discussed which falls into the category of 'General Building Blocks' was smart door locks - that is door locks which are opened using a code, fob or biometrically. As with the other solutions, people had a mixture of opinions.

Many people could see the benefit of a smart lock, particularly for people who have carers as they could programme it to allow certain people into the property. People also felt it would be beneficial for people who do not have the dexterity or mobility to use a key. Some people felt that although it was a good option, there were other cheaper options which were just as effective, such as a key safe.

As with the other solutions, some people were concerned about what would happen if the lock broke or the wi-fi went down. This highlights the importance of having support available in case the technology stops working.

Building Blocks -Specialised-

The rest of the technological solutions people discussed were options that they considered to be more specialised. These types of technology are likely to support a smaller population to be independent. However this does not mean they are any less important or impactful. For the people that find them useful, some of these solutions will have a significant impact on their lives and independence. We have represented people's views and opinions of some of these types of technology in the table below:

Piece of Technology	Benefits	Limitations
<p>Hydration Cup - Insulated cups with a smart base that monitors how much someone is drinking and can give a reminder to drink if needed.</p>	<p>This could support people who struggle to use a tap or have a memory impairment.</p> <p>"This sounds interesting, I have been told to drink more."</p>	<p>"There are some apps that can do this."</p> <p>"It only accommodates one type of drink at a time, what if you fancy something different?"</p>
<p>Automatic Pet Feeder - A device which dispenses pet food from a container at set times of the day.</p>	<p>For some people caring for a pet was important for their own mental health and wellbeing. People felt an automatic feeder could be useful for some pets if someone is struggling to feed their pet.</p> <p>"The advantage is that you don't have to get down to the floor each time. I find it difficult to bend down to reach the food so at the moment my carers help."</p>	<p>The most common reservation was that the feeder would still need to be filled up. Furthermore it wouldn't necessarily work for all pets or for all food types.</p> <p>Some people were also concerned that it would take away an important bonding activity between owner and pet.</p>



Piece of Technology	Benefits	Limitations
<p>Pendant Alarms / Lifeline - A wearable button that sends an alert to a designated person when pressed.</p>	<p>Many people were familiar with pendant alarms. People felt they were simple and good for people who are not technically minded. People also felt they are more likely to be funded by the council which was seen as an advantage.</p>	<p>Many people felt they were not attractive to wear and are easy to press accidentally.</p> <p>Pendant alarms are also limited by distance, they can only be used within the home. For some people they were unable to use them in their garden. Some people felt the range of the alarm did not allow them to go where they wanted to go.</p> <p>"I'd prefer it connected to my smartwatch - it could be paired with smart health devices."</p>
<p>Miicare - A device that monitors key health signs and can alert designated people if things don't seem right.</p>	<p>Some people saw benefit of Miicare in monitoring their health at home. They felt it could be helpful for family and friends as it could reassure them if someone lives alone.</p>	<p>Most people were not aware of Miicare. Some people were concerned about the cost of it. Others felt that reminder apps and health monitoring devices would be easier to use. A few people felt that it was intrusive to their privacy.</p>
<p>Brain in Hand - An app which allows people to set goals, manage routines and support with anxiety.</p>	<p>Some people felt this could be helpful, particularly for autistic and neurodivergent people. People were interested in its ability to create routines, goals and coping strategies.</p> <p>"I think this would help me as I get overwhelmed." "It could be good for someone who doesn't have an in-person support system."</p>	<p>The biggest concern people had about Brain in Hand was the cost. Some people felt you could use some free / cheaper apps instead.</p> <p>As with other forms of technology, it also requires a smartphone to use which may be a barrier for some people.</p>

Piece of Technology	Benefits	Limitations
<p>Adjustable Beds - Electronic beds which move into different positions.</p>	<p>Some people said this would support them to be more independent, particularly for people who find it difficult to get in and out of bed.</p> <p>"I have one and it's brilliant."</p>	<p>Some people were concerned about the cost of keeping the bed plugged in. Others felt there were more affordable alternatives such as bed wedges.</p> <p>"I'd just prop the bed up with a couple of bricks myself."</p>
<p>Camera Monitoring / Oysta - A GPS device that connects to a help centre when pressed. Also contains fall detection to alert help if the user falls.</p>	<p>Many people were not aware of camera monitoring in the home, or oyster alerts. Some people already used them and found them beneficial.</p> <p>"I have an Oysta which is triggered if I fall or am having a seizure. I wear it around my neck and helps me to be independent. I can use it out and about."</p>	<p>Some people were worried about privacy and data collection.</p> <p>"It worries me as I don't like the data collection." "It would feel intrusive if you had other people living in the house with you."</p>

Conclusion

This report has examined people's thoughts, ideas and experiences around the use of technology enabled care in Wiltshire. Largely people are receptive and open to using technology to support independence. There is a general acceptance across each age group that "it's the way it's going."

Despite this, many people are not aware of the technology that is available and how it could help them. This is not limited to a particular age or disability group. People want to learn more about technology but they are not sure where to look.

The use of technology in care should be adaptable and personalised to suit the individual's preferences and requirements. Although there are many different types of TEC, many people will benefit from 'the fundamentals' – that is wi-fi and a smartphone or tablet. Having access and confidence in this technology will maximise the impact other types of TEC will have on a person's life and independence.

What do disabled, autistic and older people want from a Technology Enabled Care service in Wiltshire?



For people to have **choice and control** over how they use technology in their life.



A **physical space** where people can visit and see different types of technology



A '**shopping list**' of technology for people to see what is on offer and what will work for them.



More **information readily available** about types of technology presented both online and by community experts.



Transparent and clear information around funding TEC, with clear options for **self-funding and council-funded TEC**.



A **support service** to help people choose, set up and maintain technology. This is particularly important when technology goes wrong or needs updating.

Personalised • Informative • Supported

Hi, I'm Violet



All about me

I'm 84 and I have recently moved into a sheltered housing scheme called Penny Lane Court.

I live on my own so I try to join in with events in the communal lounge when I'm not too tired.

Most of my family live in Kent but I have 1 nephew who lives nearby who visits me once a month.

Things that worry me

I've had a few falls recently and I worry about getting stuck when there is no-one around to help.

I had to go to hospital last month because I'd gotten my medication in a muddle, I find it can be quite confusing to remember what I have to take and when.

My arthritis is making it difficult for me to move around quickly, I get worried about reaching the phone and answering the door in time when they ring.

My family have said they think I should go into residential care if I am struggling to manage. I'm not so sure because I like my home in Penny Lane and I find moving very stressful.

What's important to me

I like being in company, I have an old cat called Spot and I want to make sure I look after him properly.

My flat overlooks the communal garden and I love watching the birds and looking at the flowers. I used to garden a lot but don't do so much now.

I like to keep in touch with my family, although it is difficult because we live far apart.

It's important to me to be as independent as I can and be in control of what I do each day.

Hi, I'm Frieda



What's important to me

I want to make sure Charlie has everything he needs, including access to the garden when he needs the toilet.

My job is very important to me and I like working from home. I don't like having any carers or personal assistants around during the day as I like to focus on my work.

It's important to me to be as independent as I can and be in control of what I do each day.

All about me

I'm in my 30s and I live in a bungalow with my husband. We have a pet dog called Charlie

I work part-time from my computer at home. My husband works full-time in an office.

I use a powered wheelchair full-time, my bungalow is adapted for my wheelchair.

I have a personal assistant who comes for an hour in the morning and supports me to get ready and prepares my meals. Once she leaves it's just me and the dog in the house until my husband comes home at 5pm.

Things that worry me

I can't open doors independently which makes it difficult when my dog needs to go outside to the toilet when it's just me at home.

I also find it difficult to reach the light switches, so my personal assistant has to leave all the lights on when she leaves. I'd much rather be able to turn the lights on and off when I want.

Hi, I'm Cedrick



Things that worry me

It's difficult to keep track of the days. If I have a snooze I can wake up in a muddle.

I keep running out of food in my fridge. My daughter gets frustrated because she says she buys me plenty of food. She thinks I'm forgetting that I've already eaten and making more food.

I'm not too steady on my feet nowadays. I have a stairlift but I still worry that I might have a fall at home.

The doctor keeps giving me all these pills but I never know what I need to take when. Usually I just don't bother with them.

All about me

I'm 88 years old and I live on my own in my home.

I was born profoundly deaf and use sign language to communicate. I also have dementia which was diagnosed last year.

I have family nearby. My son pops in most days and my daughter helps out by doing my food shop.

What's important to me

I like having visitors, but I appreciate having quiet time on my own. I like to work on my model railway set in the garage.

I love my home, I lived here with my late wife for the past 55 years. My family think I should think about moving to a residential home but I want to stay here a bit longer.

It's important to me that I can communicate with people in my home. I had carers come in for a short while, but none of them knew sign language and I found it hard to communicate. I need communication to be signed or written down.

Hi, I'm Josh



All about me

I'm 26 years old and I like gaming and watching movies.

I went to residential college until I was 23. Now I live on my own in my flat which I love. My Dad lives a 15 minute drive away, he comes round a few times a week.

I don't like animals or lots of noise, I like to have my own space.

Things that worry me

Sometimes I forget when I'm supposed to eat or drink, especially when I am gaming or reading about some of my interests.

My flat can get very messy which I don't like, but I can never decide what to tidy first and it overwhelms me. When it gets bad, my Dad helps me sort it out. He told me I need to learn to keep on top of it.

I keep losing my key, last week I was locked out for 3 hours because I lost it when I went to the shop.

I'm supposed to take tablets every day for a health problem but I sometimes forget. My doctor said I need to look after myself better but I think that I look after myself just fine.

What's important to me

It's important to me that I live on my own, I worked really hard at college to learn lots of independence skills. When I lived with Dad we used to fight a lot, we get on much better now I've moved out.

I don't work at the moment, but I would like to have a paid job one day. I think I might need some support to make sure I get ready on time when I do get a job.

I hate being told what to do, it makes me upset when people talk to me like I'm a child. I like to make my own decisions.

Below shows a selection of the cards used during the workshops to demonstrate the different types of TEC to people.

Alexa



Alexa works using voice control.

That means you have to say questions or commands out loud, and she'll respond through your Alexa speaker. Every Alexa speaker comes equipped with far-field microphones, so she should be able to hear you from anywhere in the room.

First, you say 'Alexa' and then the speaker will light up, at which point you'll ask your question. Your question will then be beamed across to an Amazon cloud server, where powerful computers will work out what you're trying to say.

You can ask her about the news or weather, set an alarm or timer, or even get her to tell you a joke. If you've got other smart home gadgets – like Philips Hue smart lightbulbs, or a Nest smart thermostat – you'll be able to control them using your voice, through Alexa. There are many things more Alexa can do.

Smart door locks



Smart (or Biometric) Door Lock

Biometric door locks work using a fingerprint sensor. Multiple fingerprints can be set to open the door, enabling different people to access the property.

Some also have a key pad so can be activated using a pin code.

They have an override key and some link to an App that can open the door and allow temporary access, for example, to a neighbour when on holiday.

Automatic pill dispensers



Automatic pill dispensers

These have different sections for medication and will present only the right dose at the right time with all other medication locked in the dispenser

Some can be linked to a phone and will send a text message advising if medication had been dispensed, not dispensed, or medication is running low or the device is faulty or needs a new battery

Additional aids such as a tipper can be purchased for those with insufficient strength or limited dexterity to lift and dispense their medication

Hydration cup



Hydration Cups

Hydration cups are insulated drinking cups that have a 'smart' base. This can monitor how much people are drinking throughout the day and remind people to have a drink.

The base allows people to set different timers and record personalised reminders or messages. It can also be set to different volumes and light levels, to suit the environment of the user.

Ring doorbell



Ring Doorbell

When a visitor presses the doorbell button on your Ring, you receive a notification on your smartphone. The video doorbell can also tell you when it detects motion.

You also get a live view of your porch and can speak with guests to give instructions or let them know you're coming to the door with a quick reply.

Ring's cameras and doorbells connect to the internet using Wi-Fi. The company also sells a variety of battery-powered cameras that don't require power cables and even have optional solar charging mounts.

Miicare



Miicare

Miicare's Miicube is an artificial intelligence device that monitors key health signs - heart rate, sleep patterns, activity levels etc.

The cube (called Monica) can request medical checks such as taking a temperature and can alert family members if things do not seem right.

Monica can also give reminders about taking medication,

Miicube is designed to be a preventative healthcare device, that can flag up when things do not seem right.

Adjustable beds



Turning and posture adjustable beds

Turning beds are mains powered hospital-type beds which will turn the user from side to side. Most are controlled by the carer from a panel at the end of the bed or by foot controls.

Adjustable beds move into various positions enabling people to find a preferred sleeping position and ease pain.

For people who may struggle getting in or out of bed raising one end of the mattress can provide support for standing up or lying down in bed without help.



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0300 1233 442



userengagement
[@wiltshirecil.org.uk](mailto:userengagement@wiltshirecil.org.uk)