**Tunstall**

Enabling independent living

# Physical disabilities and sensory impairments
## Connected Healthcare Solutions

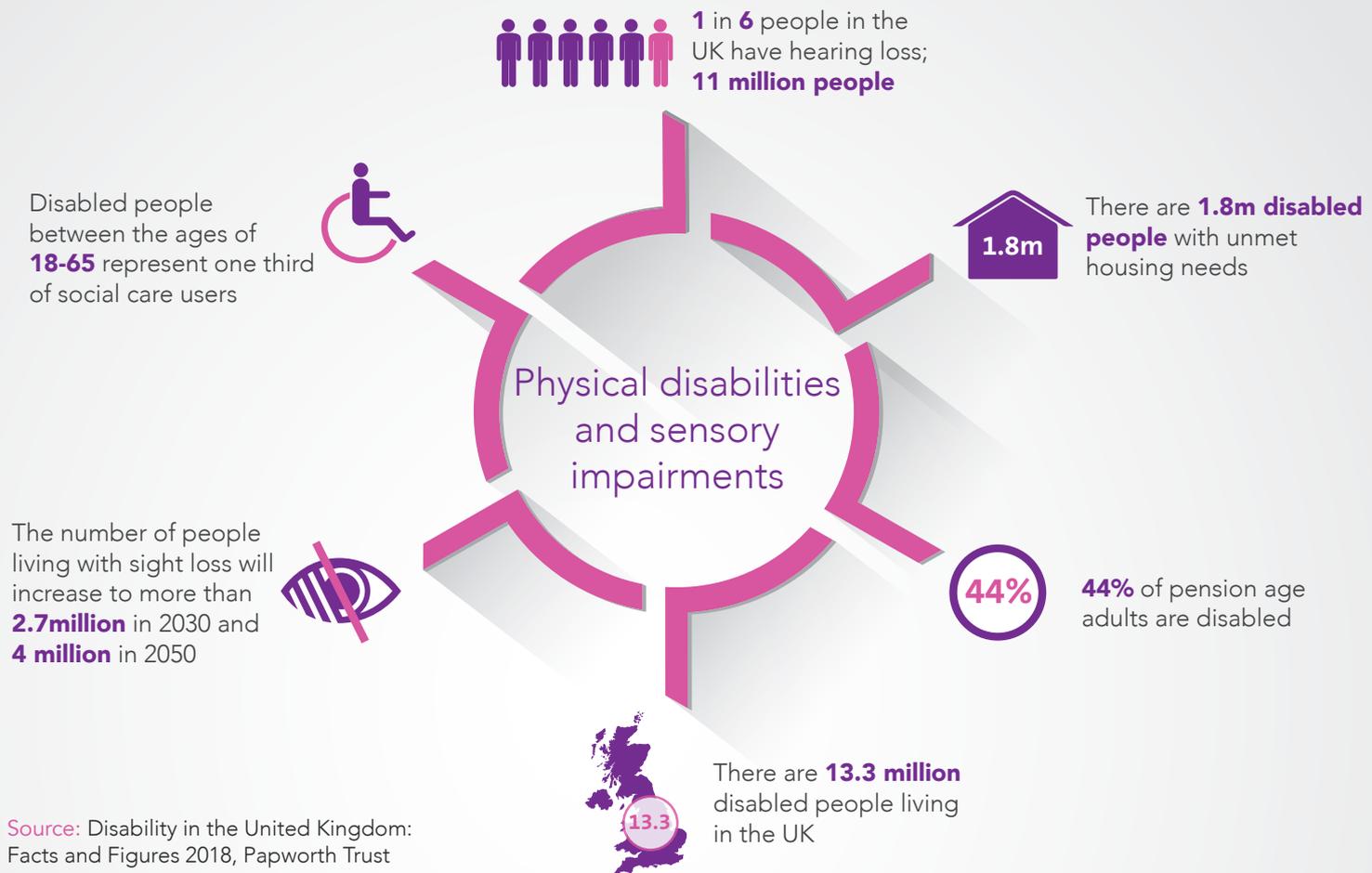Key information for health, housing and social care professionals and carers

# Introduction

Connected Healthcare technology such as telecare and telehealth has a key role to play in supporting people with physical disabilities and sensory impairments in a way that promotes independence as well as contributing to safeguarding. Technology can make a difference to people with all kinds of abilities. From managing risks such as fires or falling, to aiding communication and helping to deliver greater privacy or dignity, technology can enable people to have more control over the way they live their lives.

With public sector funding under increasing pressure, it is more important than ever that we realise the potential of enabling technologies to make a significant and positive difference to the lives of people with disabilities, and help our health, housing and social care systems to support their needs effectively.

This document outlines some of the ways technology can contribute to improving the everyday lives of people with physical disabilities and sensory impairments as well as those who care for them.

1 in 6 people in the UK have hearing loss; 11 million people

There are 1.8m disabled people with unmet housing needs

Disabled people between the ages of 18-65 represent one third of social care users

## Physical disabilities and sensory impairments

The number of people living with sight loss will increase to more than 2.7million in 2030 and 4 million in 2050

44% of pension age adults are disabled

There are 13.3 million disabled people living in the UK

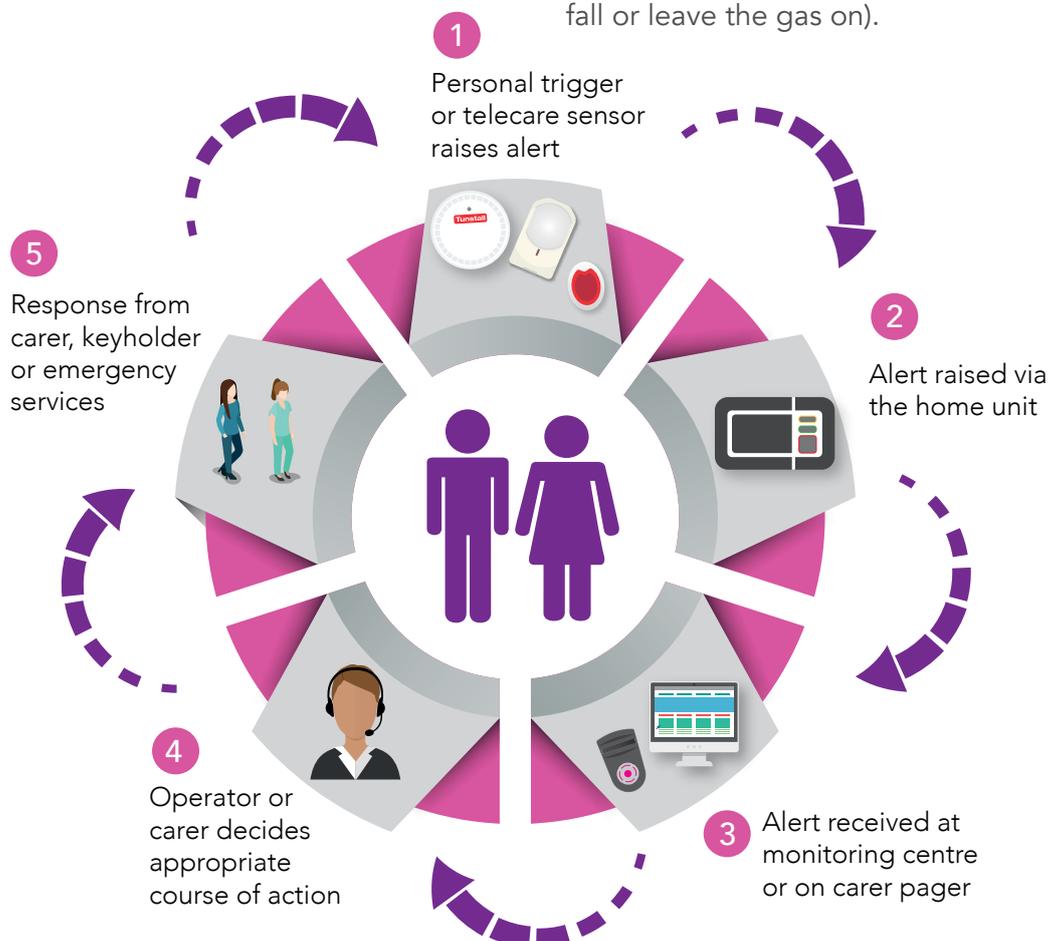Source: Disability in the United Kingdom: Facts and Figures 2018, Papworth Trust

# What is Connected Care?

Connected Care can be described as the way technology seamlessly interlinks with the wider package of care and support a person receives. Rather than the technology being seen as an 'add-on' to or replacement of the care provided by care staff, increasingly the technology is seen as integral to the holistic care plan. Connected Care ensures people receive the right type and right amount of care they need at the time and place they need it and in a way that is more efficient and cost effective for the provider and commissioner.

Tunstall offers a range of Connected Care and Connected Health solutions, which use advanced technology to provide enhanced care and support for people with learning disabilities. Solutions are tailored to the needs of the individual and their circumstances, and designed to evolve over time as the user's requirements change.

Telecare, sometimes also called assistive technology, forms a key part of Tunstall's Connected Care solutions, and is a system of devices, which supports people in their own home by helping to manage risk. Appropriate, unobtrusive sensors are placed around the home, which, if triggered, send an alert via a Lifeline home unit to a specialist monitoring centre, where trained operators can alert a carer, keyholder or the emergency services. Telecare can also be used by carers in the home or in supported or residential care environments, with alerts from sensors being received on a pager.

Telecare can provide assistance to the person to help them do things (e.g. remind them to take their medication, or not to leave home alone), and give them the means to easily ask for help by pressing a button, which can be worn on the wrist or around the neck. Telecare can also alert others of dangerous situations (e.g. if they were to have a fall or leave the gas on).



1. Personal trigger or telecare sensor raises alert

2. Alert raised via the home unit

3. Alert received at monitoring centre or on carer pager

4. Operator or carer decides appropriate course of action

5. Response from carer, keyholder or emergency services

*Examples of technology in use and further details on the types of products developed by Tunstall are detailed in the following pages of this brochure.*

# Service transformation

Connected Healthcare services and solutions such as telecare and telehealth can enable more people to be supported at home, helping to delay or avoid the need for more costly interventions. However, to be most effective, such technologies need to be embedded into provision, and form part of mainstream service delivery.

Tunstall has a range of support services which can be combined to provide a structure for transforming healthcare provision, helping to integrate support and reduce future costs by shifting the focus to prevention and self-care using technology as an enabler. We work in collaboration with customers to understand their particular challenges and develop a strategy to address them, using Connected Healthcare solutions to underpin system redesign and culture change.

The approach is modular, meaning customers can choose support with specific areas or to partner with Tunstall for the whole service.

With years of experience working across the health, housing and social care landscape around the world, Tunstall is uniquely placed to help its customers redesign their services, maximising the potential of Connected Care and Connected Health to support the delivery of integrated, efficient care and support which improves outcomes for users. This experience, along with our significant ongoing investment in Innovation and Development, ensures that we have the expertise and resources to help our customers navigate the digital evolution, and provide a futureproof infrastructure to meet market challenges and service user needs.

# Case study

Be independent.
community equipment and response service

**Telecare supporting independence for a wheelchair user**

## The situation

James Porteous is in his late sixties, and contracted polio at the age of six. As a result, his breathing was severely affected and he became paralysed. Although he made a slow recovery, James has been a wheelchair user ever since. This limited mobility has not restricted his achievements; James has had a long and successful career, and is very active in his community, gaining an MBE for his charity work.

As James gets older he is finding that some of his symptoms are worsening, and he has some pain and needs a respirator at night to help him with this breathing. His wife Gill has also recently been diagnosed with Parkinson's disease.



## The solution

James and Gill have been using the Be Independent telecare and response service for several years, with James wearing a personal pendant to enable him to call for assistance in an emergency from anywhere in his home or garden. This has been a great reassurance to him, and has also given peace of mind to Gill when she has left James alone in the house. As both their needs are increasing over time, Gill now also wears a pendant, and Be Independent staff continue to make regular calls to assess whether they can provide any other equipment or services to help make life safer and easier for them.

## The outcome

James says,

> Telecare acts as a safety net for us. We live a very independent and fulfilling life, but at the same time we are aware that one day there may be circumstances that mean we need urgent help and the system gives us that back up. It also helps our daughters feel better that we have easy, 24 hour access to help from people who know our situation. It's really a fantastic support for the whole family, and we would all be much more anxious and stressed without it.

Read the full case study at
uk.tunstall.com/beindependent

# Case study

**Managing the risk of falls**

## The situation

Mr and Mrs Smith have been married for nearly 50 years and live together at home, with supportive family nearby. Mr Smith suffers from Progressive Supranuclear Palsy, a very rare condition that results in a loss of balance. He has had several falls, and although Mrs Smith managed to help him up without requiring an ambulance attending, she was finding it increasingly difficult to get on with her day to day life as she needed to continually check that her husband was safe in his chair.

## The solution

Mr and Mrs Smith's Community Matron put them in touch with Carecall, and following assessment they were offered a Tunstall wrist worn pager system linked to a chair occupancy sensor under the cushion of Mr Smith's armchair in the lounge. The sensor pad activates the pager worn by Mrs Smith if Mr Smith tries to stand up and walk, putting himself at risk of falling. Mrs Smith is then able to get to Mr Smith in time to make sure he doesn't fall. Mr and Mrs Smith have also been provided with a bed occupancy sensor which links to a vibrating pillow alert under Mrs Smith's pillow. If Mr Smith leaves his bed in the night and fails to return safely within a short time, Mrs Smith will be woken by the vibrating pillow alert, as was the case when Mr Smith woke following a bad dream and went into another bedroom where unfortunately he fell. The vibrating pillow alert woke Mrs Smith who was able to get him safely back into bed.

## The outcome

Mr Smith has now started to use the chair occupancy sensor to get his wife's attention, raising himself slightly from his chair to make Mrs Smith's wrist worn pager vibrate. If the doorbell rings and Mrs Smith has not heard it, or if he requires help, Mr Smith now has a simple and safe means of contacting his wife anywhere in the house or garden.

# Case study

**Telecare providing reassurance and supporting independence**

## The situation

Wendy is a 53 year-old social worker for Hull City Council who lives in Hull with her partner, Pete. Wendy has muscular dystrophy, a genetic muscle-wasting condition that over time leads to an increasing level of physical disability. Wendy uses a wheelchair and is supported by carers for day-to-day living. Wendy also has a Canine Partners assistance dog called Connor, a Labrador retriever cross. Connor helps Wendy with such tasks as putting washing in/out of the washing machine, pressing buttons and opening doors. A former lecturer at the University of Lincolnshire, Wendy works for Hull City Council with adults who need support to live their life, as well as looking after her grandson every Thursday.



## The solution

Determined not to allow her condition to compromise her independence and safety at home, Wendy started using the Hull City Council Telecare Service in 2009. Wendy's telecare includes:

- A MyAmie personal trigger that Wendy can press at any time if she needs to summon help from anywhere in her home or garden

- Smoke detectors to raise an alert at Kingston Care monitoring centre in the event of a fire

- A Lifeline home unit, which can receive alerts from Wendy's MyAmie and smoke detector sensors linked to the monitoring centre, so that an alarm can be raised 24-hours a day

## The outcome

For Wendy, telecare reduces the risks of independent living and gives her peace of mind. For example, on one occasion, Wendy became separated from her house keys and ended up being locked in her home, unable to get to the phone. Having trained Connor the dog to push the alert on her telecare unit, Wendy told Connor to press the button. Connor pressed the button and staff at the monitoring centre called a locksmith.

Wendy says,

> " Telecare gives me some 'me time', because I don't always want somebody to be supporting me in my own home, but it's nice to have the reassurance that I can get help if I need it. "

# Case study

Lancashire County Council

**Supporting independence for people visual impairment**

## The situation

Mrs P lives in Lancashire in her home of 35 years. She has a weakness in her right side and is registered partially blind. She receives 13 hours of care per week and her family ring her each morning and evening to check on her wellbeing. After a fall which resulted in Mrs P being hospitalised, she was keen to return home but worried about moving around her house and falling again in the future.

## The solution

Following a full telecare assessment, which included identifying potential risks and an understanding of Mrs P's daily activities, a Lifeline Vi+ home unit, iVi intelligent pendant, two smoke detectors, a carbon monoxide detector and a Key Safe were installed. Each piece of equipment was tested and the installer ensured Mrs P knew exactly how to use them and how to contact the operators who are on hand 24 hours a day, 365 days of the year. The service also provides a Home Responder who can visit in an emergency situation to help Mrs P.

## The outcome

There have been six activations of the iVi since the equipment was installed; on five occasions Mrs P was ok, but recently she had a fall which resulted in an injury. The iVi raised an alert at the monitoring centre, where an operator could talk with Mrs P via the Lifeline home unit, arrange for an ambulance and stay on the line until medical help arrived. Mrs P feels happy having telecare as it gives her confidence to remain at home alone, and gives her children peace of mind.

Mrs P says,

> " It has given me a new life, thank you so much. I feel at peace and safe knowing that there are operators at the end of a button. Lifeline does what it says, it saves peoples' lives. People don't realise how important it is, it really is a lifeline.

# Solutions

## Lifeline Smart Hub

The Lifeline Smart Hub is Tunstall's first IP home unit, and represents a step change in the way telecare services can be delivered, making them faster, more efficient and more insightful. The Smart Hub retains the reliability of our analogue Lifeline units, but removes the restrictions of relying on an analogue connection and brings the many benefits of IP, such as remote management of units, Activities of Daily Living, monitoring and tracking, data gathering and intelligence leading to better quality services.

## Vibby

The Vibby is a sleek, contemporary and technologically advanced fall detector which can be worn on the wrist. The Vibby will automatically raise an alert if it senses the user has fallen, and also enables the wearer to easily call for help manually.*

## iVi intelligent pendant

The iVi intelligent pendant is a small, lightweight device which allows the wearer to press a help button to generate an alarm call, and will also automatically generate a call for assistance if it detects a fall.*

## Bogus caller/panic button

Fitted near the door, the discreet bogus caller button can be used to call for assistance at a 24 hour monitoring centre if a stranger requests entry into the home. Operators can advise the user, and all calls are recorded and can provide evidence admissible in court.

## Lifeline Vi and MyAmie

The Lifeline Vi home unit receives alerts from telecare sensors placed around the home and automatically raises an alarm with a carer or monitoring centre. The MyAmie pendant can be worn on the wrist or around the neck and allows the user to call for help simply by pressing the red button.

## Property exit sensor (virtual)

The virtual property exit sensor combines a Fast PIR with a door usage sensor (universal sensor) to create a solution which can monitor a door, generating an alarm if a client leaves their home (during the monitoring period) and does not return within a set time. It can also detect if a main exit door has been left open.

## CareAssist

CareAssist is an extremely easy to use, portable device that provides onsite carers with a means to receive instant alerts from a range of telecare sensors. This means that carers can be quickly made aware of any incidents allowing them to respond, but removes the need for them to continually observe the person they care for.

## Smoke detector

Tunstall smoke detectors provide increased reassurance by raising an alarm call at the monitoring centre while also activating a local audible alarm, if they detect smoke.

*Due to the wide variety and type of falls some falls may not be detected. In the event of a fall the service user should always be advised to try and press the help button on the iVi or Vibby.
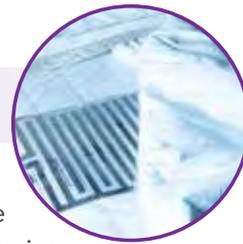
# Solutions

## Natural gas detector

The natural gas detector raises an alarm call the moment the leakage of gas is detected, allowing the appropriate corrective action to be taken. It is supplied complete with standard UK mains plug and a preconfigured universal sensor, and doesn't need to be installed by a qualified electrician.

## Epilepsy sensors

Epilepsy sensors are used to monitor people with epilepsy while they sleep. Patented sensor technology detects a person's movement in bed and is able to differentiate normal movements from epileptic seizures.

## Bed shaker

The bed shaker is a Bellman & Symfon device which works as part of a telecare system to wake users in the event of a transmitter being activated. It can be used to alert people with learning disabilities if, for example, the smoke detector is activated during the night, or to wake carers if, for example, a bed occupancy sensor in another room indicates the person they are caring for has left their bed.

## Environmental Controls

Tunstall systems can also be configured to operate with a range of third party devices, such as sensors to control curtains, heating, lighting and windows, access control, aids to support bathing and toileting, cognition and communication aids, medical and therapeutic products and audio visual aids.

## Enuresis sensor

Placed between the mattress and sheet, this sensor provides immediate warning on detection of moisture, allowing effective action to be taken. The sensor eliminates the need for carers to make physical checks during the night, promoting dignity and independence.

## Bed occupancy sensor

This specially designed pressure pad provides an early warning by alerting that the user has left their bed and not returned within a pre-set time period. The sensor can also be programmed to switch on lights, helping people find their way to and from bed easily.

## Medication dispenser

Automatically provides access to medication over a 28 day period, providing audio and visual alerts to the user and/or their carer each time medication should be taken, and raising an alert if the user fails to access their medicines.

## Digital health

Tunstall offers a range of solutions to enable people, with assistance if required, to monitor their health condition at home. Vital signs and symptoms can be remotely monitored, and readings outside of parameters set for the patient will raise an alert with a clinician, enabling early intervention and avoiding further deterioration in health and the need for more complex care. Digital health monitoring can be particularly helpful for people with dementia who may not be able to communicate their symptoms.
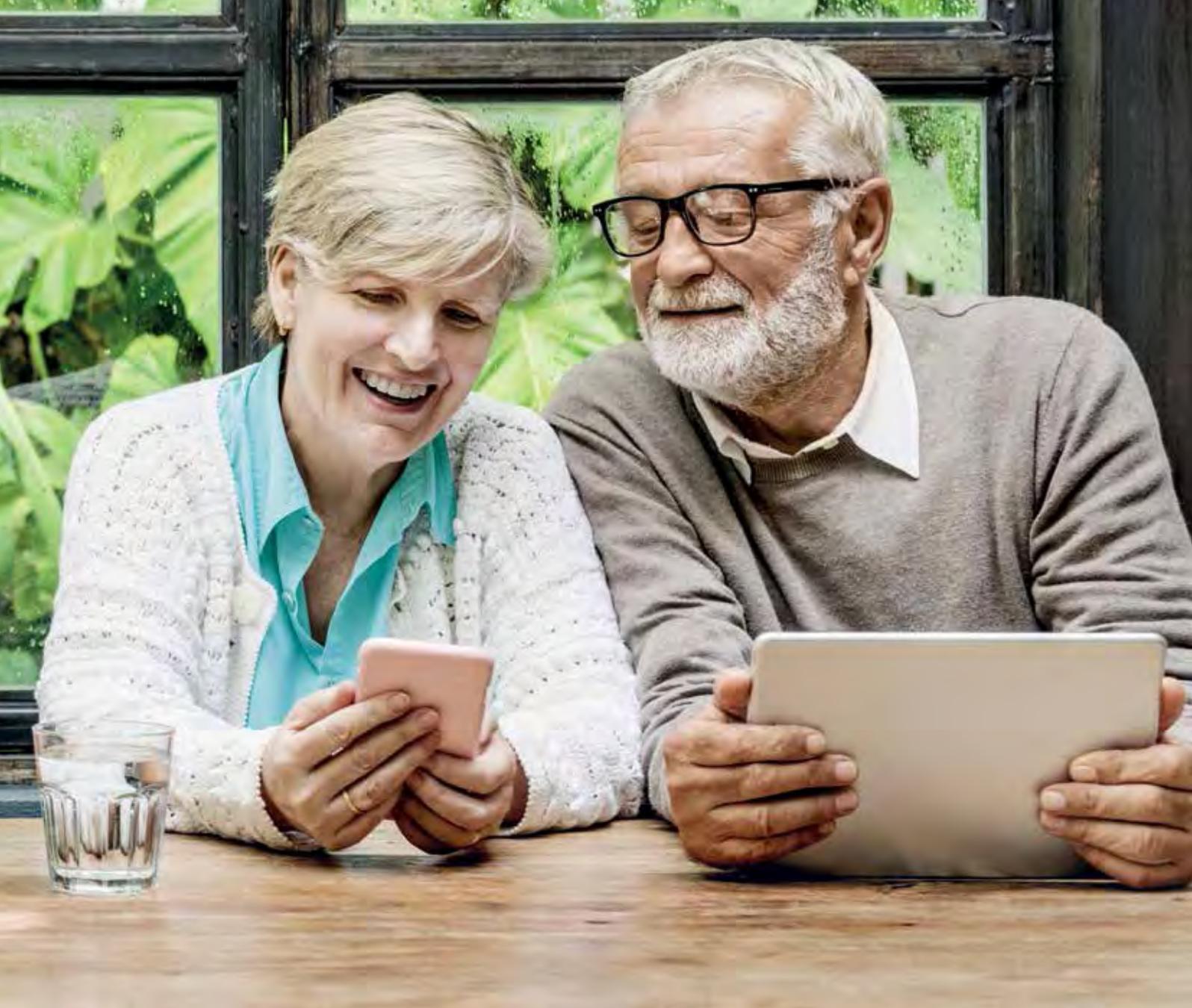
# The digital opportunity

BT has announced that it intends to complete the transition from an analogue telephony infrastructure throughout the UK to an IP (digital) network by 2025. The delivery of digital technology represents a huge opportunity to improve quality of life, making services faster, more efficient and more insightful.

Digital technology makes new models of service delivery achievable, with the power to;

- Empower and enable
- Safeguard and support
- Bring people closer together
- Give increased control over the way people live their lives

Tunstall has a range of resources available to help its customers navigate the digital transition, and can offer advice and support on managing the short-term impact as well as how to plan effectively for the future. **Visit uk.tunstall.com/digital to find out more.**

## About Tunstall

Over the last sixty years, Tunstall has pioneered the use of technology to enable independent living, creating the Connected Healthcare industry as we know it today, and supporting more than five million people and their families across the world. Tunstall was the first to develop alarm systems for older people, and has continued to lead the market ever since, remaining at the forefront of developments such as telecare and telehealth, right up to the present day where we are harnessing the power of digital technology.

We blend British design and manufacturing with externally sourced innovation to create a cost effective portfolio of services, underpinned by our global experience of enhancing care in the home for people in more than fifty countries. As the digital opportunity accelerates the speed of change, we continue to work in partnership with our customers to develop more ground-breaking, life-changing solutions.

**For further advice, please contact your Tunstall Account Manager or call us on 01977 660479**

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