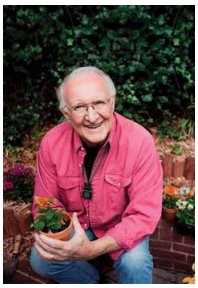
WHITEPAPER

Digitising Technology Enabled Care

How digital telecare is creating an independent, flexible future for its users



careium

INTRODUCTION:

PREPARING FOR A DIGITAL-FIRST FUTURE

Telecare is changing. 2025 will see BT turn off its ageing analogue network for good as the UK embraces a fully digital network. The transition is already well underway - as soon as next year, BT will stop selling analogue lines.

However, the switch could provide challenges for the social care service providers who work tirelessly to protect older people in the UK – a population that is growing every day (by 2050, 25% of the UK's population will be over 65).

The reality is that by 2025, millions of the analogue telecare devices that older people rely upon will become obsolete. In the meantime, those same devices will become harder and more expensive to maintain. And call failures will continue to be a problem when analogue technology is used on digital networks. So, as we approach the switch over deadline, there is a risk that vulnerable older people will get left behind.

> **"The transition to digital promises benefits that we've never seen before in the industry. Digital networks will make telecare more reliable and secure."**

But, perhaps, we're looking at the situation from the wrong angle. A broader range of discreetly designed, "always-online" mobile technology will offer service users the freedom and independence to more enjoy active lives, while still providing peace of mind by having an emergency device at their fingertips. And the switch also opens the door to new solutions for preventive, proactive and predictive services.

Careium (formerly Doro Care) is a market-leading TEC company and the main provider of innovative digital solutions and services in Sweden, Norway, the Netherlands and the UK. As a global expert on analogue to digital transformation, we already take half a million digital alarm calls a month.

In this whitepaper, we'll draw on this expertise to demonstrate the opportunity digital telecare presents to both users and service providers. What's more, we'll show you how those benefits can be realised right now.

Gary Clark,
Digital Transformation Director, Careium

ANALOGUE INFRASTRUCTURE IS GETTING A DIGITAL UPGRADE

The UK relied on an analogue communication network for over a century. However, the technology and copper wires that underpin that network are becoming harder to support and increasingly prone to failure.

As a result, Openreach and other communication providers will be flicking the off switch on their networks by 2025. Many telecom exchanges have already become fully digital. And BT has said they will no longer sell analogue devices from 2023 – a date which is increasingly seen as the real cut-off point for the digital to analogue transition.

The UK has seen similar switches before. We successfully made the move from analogue to digital TVs over a decade ago. Now the same thing is happening to the old phone network. Ageing analogue networks are becoming increasingly hard to maintain and deploy. Over the next few years, all landlines will be upgraded to digital ones. (And, in most cases, you won't even be able to order analogue landlines from next year.)

NAVIGATING THE SWITCH SAFELY

Just like these technologies, telecare will be subject to the same challenge. Action is needed now to ensure telecare services remain safe and reliable as we rapidly approach the 2025 deadline. According to the Telecare Services Association (TSA), a large proportion of telecare service providers haven't even begun to upgrade their analogue equipment.

BT and Virgin Media O2 currently use Analogue telephone adaptors (ATA) - which allow analogue signals to traverse a digital network - to connect telecare alarms to routers. However, it's not clear if these will be supported in the future. Line providers recommend that digital devices should be used over digital networks going forward.

Rest assured, digital connections are here to stay. Some network providers have indicated they plan to phase out 3G connections over the next few years. However, the widespread availability of legacy equipment, particularly in the security industry, means 2G will be supported in the UK for the foreseeable future. Meanwhile, many telecare devices offer the flexibility of both 2G and 4G connectivity in order to help service providers prepare for the future.

Peter Wallström,
Category Manager, Careium:

"Digital telecare is helping senior people to live more fulfilled lives for longer. Technology such as digital social alarms – backed up by advanced SCAIP-protocols - means that connections with service centres are more reliable, secure and transparent than ever before. No one in our society need fall through the cracks."

NEXT GENERATION TELECARE SERVICES FOR A CHANGING POPULATION

The UK's population is getting older. Around one-fifth of the UK population (19%) was aged 65 or over in 2019 - around 12.3 million people. This figure is expected to increase to 24% of the population by 2043.

This is great news. People are living longer, healthier, and more active lives. According to ONS statistics, in 2018, a man aged 65 could expect to live for another 18.6 years, while a woman could expect to live for 21 more years.

However, the fact remains that most people will still naturally develop health issues as they grow older. 75% of 75-year-olds in the UK have more than one long term condition, rising to 82% of 85-year-olds (Barnett et al., 2012).

> "Around four million older people have a limiting long-term illness or disability. Estimated to over six million older people by 2030"

SUPPLEMENTING THE GROWING DEMAND FOR SOCIAL CARE

As a result, the number of people who need social care has risen over recent years. According to NHS Digital stats, 1.9 million people requested support from their local authority in 2019/20. That's an increase of more than 100,000 since 2015/16.

This creates challenges. 1.5 million people work in adult social care in England – a similar figure to the NHS. But even this number cannot satisfy the UK's social care need. 2020 data found there were 112,000 social care vacancies - over 7% of the social care workforce in England.

Between 2015-2020, 120,000 more people requested social care support – but 14,000 fewer received either long term or short term support. The UK Government introduced a Health and Social Care Levy in April 2022 to help fund social care. But the demand for such services continues to rise along with the costs of providing them.

In addition, the way we approach social care is also changing. Most older people want to stay at home for longer. The number of older people living in specialist retirement housing or in 57n care homes is relatively low. Most live in their own homes. However, for many older people, this independence needs to be balanced by the reassurance that, should something happen, help is nearby.

Thankfully, advances in digital telecare mean network connections are significantly more reliable, robust, and secure than those found in analogue technology. What's more, connections between a device and a monitoring centre are much quicker – reduced from 60-90 seconds to 5-10 seconds in most cases – giving older people and their families peace of mind.

Beyond these practical concerns, digital telecare devices are more likely to be designed to be contemporary and discreet – providing a more dignified experience for end-users. Meanwhile, mobile and wearable technology means older people can continue to enjoy more flexible, active lifestyles when they are away from home.

LOOKING TO THE FUTURE

Digital telecare is out by 2025, access to 2G and 4G network capability means digital devices will continue to offer long-term support. And newer digital care devices can also be seamlessly integrated into this new digital infrastructure. Compatible technology and sensors, such as smoke detectors and fall detectors, will create a safer environment in the home.

Advances like these mean that digital telecare users can live safer, more confident, and independent lives.

USE CASE: USING TECHNOLOGY TO SUPPORT SWEDEN'S ÖSTERSUND MUNICIPALITY

The Swedish municipality of Östersund, like many districts in Europe, faces challenges caring for a growing number of older people. It's also found it difficult to find sufficient staff resources.

To counter this, the municipality has introduced technical aids such as night vision cameras and GPS alarms to make life easier for both users and their relatives. These innovations include the Careium 480 - a GPS watch that has a positioning alarm and a built-in speaker.

Åsa Trolle, Unit Director at Östersund municipality, said: "We can give the elderly a GPS watch and the security of knowing they can alert us if something happens. The positioning function enables us to locate the person, and we can also phone them. We can only see advantages with this product."

OPERATIONAL IMPROVEMENTS FOR SERVICE PROVIDERS

Today, most telecare alarm equipment is designed to run over an analogue telephone network. The clock is ticking - UK businesses must make the transition to digital systems soon. Understandably, many have reservations about choosing the wrong solution.

But this doesn't need to be the case.

A RELIABLE CONNECTION

For a start, digital technology reduces the risk of errors. Analogue alarm equipment sends call data via traditional point-to-point connections as audible voice tones known as DTMFs (Dual tone multi-frequency). As we transition to digital networks, these DTMF tones need to be broken down into "data packets" and then reassembled at the alarm monitoring centre.

Unfortunately, the two technologies don't always mix. Call data can get lost in translation, leading to call failures and delays. In fact, analogue alarm equipment calling over digital networks are failing to connect first time in one in ten cases. This could pose problems for the people who rely on alarms to keep them safe. Digital to digital technology doesn't have these issues.

"The clock is ticking - UK businesses must make the transition to digital systems soon. Understandably, many have reservations about choosing the wrong solution. But this doesn't need to be the case."

REDUCING COSTS WHILE IMPROVING SERVICE

The switch to digital will also reduce operational costs. While the adoption of any new technology requires an upfront investment, a controlled switch now means more savings in the long run. Maintaining analogue alarms is increasingly expensive and difficult. They require manual testing, field support and updates. Meanwhile, digital devices are under constant online supervision and can be updated remotely. This provides a quicker and more efficient service, ensuring any downtime is kept to a minimum.

However, as well as updating devices, it's also important that monitoring centres are also converted to digital. A fully digital system ensures monitoring centres have immediate and secure access to data on each alarm call, including information on the caller, the alarm type, and the location of the call.

Digital, cloud-based monitoring centres also give service providers greater control and flexibility over how alarm calls are routed, shared, and responded to - while taking into account factors like the time of day and peak call traffic.

USE CASE: CAREIUM SUPPORTS THE ROLL OUT OF A DIGITAL TELECARE SERVICE FOR FALKIRK COUNCIL

Falkirk Council

Falkirk Council was the first local authority in Scotland to go live with an end-to-end digital telecare service. The council's "life and limb" Mobile Emergency Care Service (MECS) traditionally relied on analogue phone lines to operate. Working with Careium, the project team replaced 3,335 analogue MECS alarm systems in people's homes with pre-programmed, digital-ready ones.

The Council and Partnership were awarded the Gold Level 1 Digital Telecare Implementation Award by the Digital Telecare for Scottish Local Government Programme in recognition of this achievement.

Pauline Waddell, MECS Team Manager, Falkirk Council, said: "The main thing that Careium alarms have brought to people in Falkirk is safety. We were worried because we could see that the analogue system was failing, and so it became paramount that we completed this transfer as quickly as possible."

A BETTER USER EXPERIENCE

So what exactly sets digital systems apart from analogue when it comes down to the nuts and bolts of the network?

A RELIABLE CONNECTION

Analogue technology has drawbacks. For a start, it's not always obvious when there's an issue with an alarm device. That's because analogue systems only interact with monitoring centres when a call is made. Outside of call, analogue alarms are typically only checked once a week or once a month. And even this depends on whether the user remembers to do so: sometimes devices can go months or years without being tested. This means there is a risk that the fault is found too late.

Digital telecare, however, is always online. The alarm and monitoring centre are in constant communication. Status checks can be run as regularly as every two minutes. Should a problem occur, it will be detected immediately.

Thanks to their 24/7 online connections, digital alarms can be monitored, serviced and updated remotely when required. Not only does this reduce the cost of visits from service engineers and telecare support staff, but it also ensures the device is always running the most up-to-date firmware.

CONSISTENT QUALITY AND COVERAGE

The switch to digital means a better-quality audio connection, as well as a more reliable one. Digital solutions remove traditional interference as they do not require any analogue to digital conversion. They also remove the need for legacy "simplex speech" – where speech is controlled by the monitoring centre – which could cause confusion and delay when communicating with an end user.

In addition, roaming SIM cards – that automatically choose the best network – are supplied with all Careium devices. This ensures a connection in areas where consistent coverage may be an issue. Finally, in the event of a connectivity issue, support can be provided immediately by the service provider, who will be notified automatically.

FROM FIXED LINES TO FREER LIVES

Technology is evolving. Fixed analogue phone lines are becoming a thing of the past. But because digital social alarms only need a broadband or mobile connection, users no longer need to be tethered to a single location.

Mobile solutions mean social digital alarms can be installed virtually anywhere. And the modern design of many newer devices means they can become part of the furniture. As a result, digital telecare users can continue to live a full, active life without making concessions to the limitations of older analogue technology.

And, rest assured, the widespread use of mobile telecare devices is already proven. 95% of Swedish digital alarms installations now use mobile network connections. In addition, service users in several Swedish municipalities are given a choice to choose between a fixed social alarm or a mobile GPS device - with the latter encouraging a more active, social life.

USE CASE: MOBILE GPS TELECARE IN FRANCE FOR A YOUNGER, MORE ACTIVE DEMOGRAPHIC

There's a growing market for mobile GPS telecare, as digital networks and roaming SIM cards are providing reliable and secure connectivity outside of the home. These devices can often provide reassurance and support for a younger, more active demographic. One organisation offering this new generation of service-led solutions is Europ Assistance based in Saint-Denis, Paris.

Benjamin Ostrowka, President of Europ Assistance La Téléassistance in France, explains: "At Europ Assistance we believe in finding solutions for people to stay living independently at home, while also ensuring they have the freedom to enjoy being outdoors and live life to its fullest. We were looking for a product that would be reassuring and safe for seniors living alone, but also for their family caregivers. We wanted it to be discreet and to avoid the stigma often associated with remote assistance devices.

The Careium 450 meets these objectives perfectly: a discreet, light and mobile trigger that provides security for seniors when they are out and about or at home, very easy to install and simple to use, and therefore very much appreciated by older people. The two main benefits: its GPS system to ensure geo-localised mobilisation of emergency services and its second button to communicate with one of the family caregivers and share its position."

europ assistance

CONCLUSION: A BRIGHTER, MORE CONNECTED FUTURE

Telecare has grown steadily over the past 20 years. But the switch to digital marks a step-change for the sector.

Ultimately, telecare users have one very simple expectation – to have the peace of mind to know that someone is at the other end of a phone who can provide help if they need it. It's therefore essential that the transition from analogue to digital should be as seamless as possible.

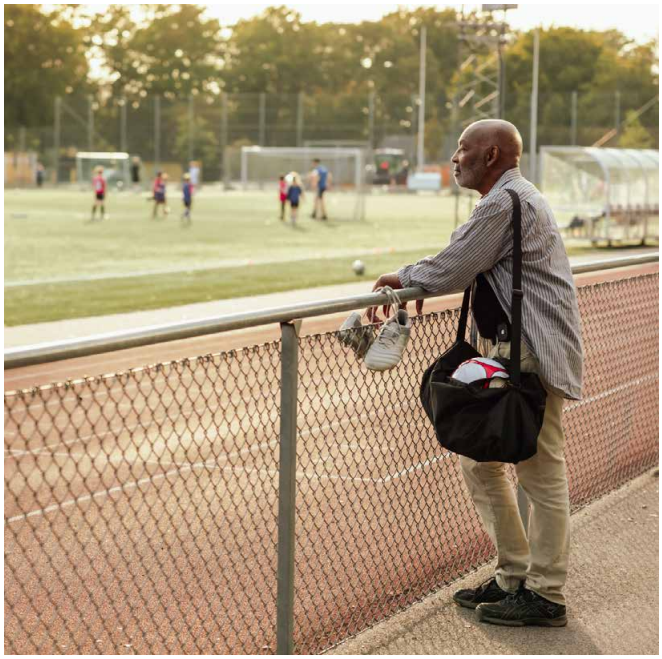
However, this switch needn't be a moment of apprehension. It's the chance to embrace a more reliable, secure, and cost-efficient telecare solution. By doing so, we're providing huge benefits to a rapidly growing population of older people in the UK.

Yes, change can be daunting. Adopting new technology can sometimes be more difficult as we get older. But the right partner can help organisations prepare for 2025 and embrace an all-digital world with confidence, rather than feeling like it's being forced upon them. Digital telecare technology is already proven. And thanks to 2G and 4G connectivity, it's here to stay. By giving themselves enough time as possible to begin their digital journey, service providers can ensure a positive, managed transition. It also means that they can start to benefit from more reliable connections today, while saving on the cost of servicing obsolete analogue technology.

Just as importantly, the users of digital telecare have much to gain. Thanks to mobile devices and networks, millions of older people in the UK will be able to live more flexible, independent lives. And advances in digital technology mean that telecare services can better understand people's behaviour while anticipating significant changes that may lead to an emergency.

Today's digital telecare devices benefit from a thoughtful, contemporary design aesthetic – allowing them to blend into the background of everyday life. And, should a time of need ever come, always online connections provide the reassurance that help is always close by.

Put simply, by thinking differently about digital, we can help make life better for millions of people across the UK.



Peter Shirley,
International Director, Careium:

"An all-digital future is bright indeed. It will open new doors and opportunities for older people while giving service providers more control over their services and access to a more reliable and secure network. The digital transition we have seen in the Nordics is finally happening at scale in the UK. I'm excited to see how the digital telecare infrastructure will continue to evolve and help people live increasingly independent, secure and rewarding lives.

"As the leading providers of telecare services in the UK, we believe we have the knowledge, expertise and technology to help service providers make the switch with confidence. Beyond developing telecare equipment technology, we know we need to utilise that technology to provide services that are needed, intuitive, and genuinely make a difference. So, as we move to digital, our aim is first and foremost to ensure end users and customers continue to receive the high-quality service they expect."

If you would like to speak to us about moving to digital and your free digital review, contact us at uk.sales@careium.com

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