

Erosh explores ...

January 2019



Digital Switchover

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We couldn't avoid using some technical terms in this guide! We have provided a handy list of definitions on page 8. Where these terms are referred to in this document, they are highlighted green with a link to the definitions page.

1. Who we are



Legrand are global experts in electrical and digital building infrastructures, with a presence in over 90 countries.

Tynetec, Aid Call and Jontek are the three brands that combine to form Assisted Living & Healthcare, which specialises in creating innovative technology based care solutions for health, housing and social care services.

Tynetec supply a range of hardware and software solutions all manufactured in house, including grouped living systems, telecare solutions and access control systems to local authorities and housing associations.

Jontek provide monitoring and response centre software solutions, incorporating telecare, telehealth and m-Care to public and private sector organisations across the UK.

Aidcall has been a leading manufacturer of wireless nurse call technology for over 40 years, with a range of products and bespoke solutions that are designed to specifically meet the needs of care homes, care groups and hospitals in both the private and public sector.

We are very grateful for Legrand for supporting this Digital Briefing as well as the new erosh website.



erosh is a membership organisation for professionals in the sheltered & retirement housing sector. We provide news, commentary and good practice to help you respond to current and future challenges and opportunities; to enhance individual and organisational performance; to help you comply with national standards; and ultimately to improve the quality of housing and support services for older people.



The voice of technology enabled care

TSA is the industry body for technology enabled care (TEC) services, representing over 350 organisations including telecare and telehealth service providers and suppliers, commissioners, digital health businesses, housing associations, emergency services, academics, charities and government bodies. It helps organisations that commission, provide and supply technologies such as telehealth, telecare, and telemedicine services as well as digital health including self-care apps, health IT, mHealth, eHealth, smart home technologies, artificial intelligence and internet of things. It does this through strategic influencing and lobbying, business transformation and growth support, training and education, best practice events and networking forums, identifying tender and funding opportunities and advising on TEC commissioning. TSA's independent standards arm, TEC Quality, sets standards and audits and certifies organisations against its Quality Standards Framework (QSF).



The Almshouse Association provides support, advice and guidance on a broad range of general and specific issues, to over 1600 independent almshouse member charities that provide around 35,000 dwellings across the United Kingdom.

2. Foreword by TSA CEO, Alyson Scurfield



The voice of technology
enabled care

Opportunities in digital

By 2025, analogue telephone services will be switched off as the UK's telecoms infrastructure is upgraded to digital connectivity. This shift has major implications for the 1.7 million people who rely on telecare in the UK, and on the organisations that manage health, housing and home care.

The paramount concern of TSA is that the reliability and safety of telecare and social alarm services is not compromised - that lives are not put at risk.

In so much of our lives and business, smart phones and tablets connect us, help us manage our finances and enable us to buy goods and services. With advances in voice activated internet connected devices, the use of this new technology is within the reach of everyone, whether computer literate or not, and whatever their level of ability.

Across social care and housing staff shortages and budget restraints present a massive challenge to ensuring the safety and wellbeing of service users and residents. The switch from analogue to digital might seem like yet another hurdle to overcome.

However, if we are ready for the opportunities that digital offers, not fearful of the challenges it may throw our way, this can be a huge catalyst for change.

Smart technology can better manage workflow and scheduling, supplementing warden visits with remote monitoring and proactive calling for example. Repurposing everyday domestic devices to support independent living can play a part in making the best possible use of an overstretched workforce.

The pace of change in the digital world requires a dynamic procurement response from commissioners and developers to ensure that solutions fulfil the needs of individuals. Training and workforce professional development also play an essential role in making the shift. Individuals can reject technology options that are poorly introduced by untrained staff.

Above all, TSA wants to ensure the transition is handled well, that people are not put at risk and the potential of a digital future for our more vulnerable population adds to their lives rather than disadvantages them.

This guide goes some way to outline the process that is taking place between now and 2025. To find out more, both EROSH and the TSA are running regular regional networking events that will aim over the next few years to support organisations in their journey to digital.

Alyson Scurfield
Chief Executive Officer
TEC Services Association
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3. Introduction

“Every hour of every day, telecare services directly support the independence and safety of 1.7 million vulnerable people in the UK. Those individuals who may have otherwise required a number of home care services or a place in a care home, can, with the help of the right technology enabled care (TEC), aim to maintain and regain their independence.” (TSA, 2017)

“Housing Associations, like any business, must adapt and change their business models, to accommodate their customers’ new behaviours and their expectations of how they want to interact with you.” (Orm, nd)

This guide will focus on practical considerations for sheltered and retirement housing providers including:

- Where are we now and where we are heading
- Benefits of changing from **analogue** to **digital**
- Key definitions and policy context
- Implications, risk, and key considerations for housing related support providers
- Assessment of current and new considerations and costs
- Leadership, responsibilities, planning, consultation and communication
- Where to find further information

4. Where are we now?

4.1 You will already be aware of the increasing role of technology in supporting individuals to live independently as well as the shift to **digital** or internet enabled services in our professional and personal lives. Mobile communications and remote working make our working lives more efficient; and the **Internet of Things** such as **voice activated or voice operable systems** (Amazon Echo/Alexa, Google Home etc.); connected central heating systems/smart meters, smart fridges; and **wearable devices** (Fitbit etc.) which are **‘always on’** or **‘always listening’** make our home environment more convenient and accessible. Cloud based services are more prevalent providing secure, flexible and cost-effective platforms unconstrained by geography, not reliant on hardware needing constant maintenance, and benefitting from instant software updates; and there are new and varied ways of accessing information. All this provides a much greater role for ‘consumer selection’ as well as for ‘data driven’ services.

4.2 More people, including older people, are using technology to manage their lives and access information; this will of course increase as younger people familiar with the technological world grow older.

Did you know for example:

The average home has 8.3 web connected devices

By 2020 20-30 billion devices will be connected to the internet globally

Over 10% of UK patients order prescriptions online

3 million wrist devices were sold in the UK in 2015

Source: [TSA](#), 2017

- 4.3 **Telecare** services are delivered to older people through remotely connected systems and monitoring devices which help to manage their needs, enable them to live safely, securely, and independently, to manage their health and well-being, and to reduce loneliness and social isolation. They enable older people to remain in the home of their choice, reduce anxiety (for families and carers as well as service users) and, through monitoring and managing, often prevent or delay the need for more intensive and more costly care interventions or accommodation.
- 4.4 The technology used in the housing and care sector, particularly in relation to community alarms systems, is still relatively traditional and based on **analogue** telephone lines with stand-alone devices which are connected to dedicated monitoring systems and which need to be installed by specialist companies.

5. Where are we going?

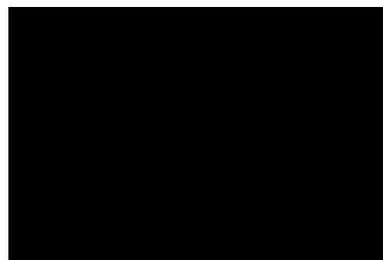
5.1 Over the next few years, the UK's telecommunications infrastructure is fundamentally changing and being upgraded to **digital** connectivity (using **internet protocol (IP) technology**). According to the **Telecare Services Association (TSA)** the timetable is as follows:

- Digital shift process starts – 2018
- End of wholesale provision of analogue lines by BT - 2023
- Full switch-over completed – 2025

5.2 In a recent survey by the Housing LIN and Appello (undated, p7) it was found that only 56% of housing organisations had any plans in place to make the transition from an **analogue** to a **digital** system. 9% had no plans at all and 19% didn't know!

5.3 What is clear however is that the '**digital** switchover' will definitely happen, so sheltered and retirement housing providers must prepare in order to minimise disruption, to ensure service continuity, and to avoid compromising the safety of vulnerable service users; as well as to maximise the opportunities and benefits digitalisation offers. Even before the '**digital** switchover', changes already underway in some areas of the UK may have an impact on the reliability of existing services and providers will need to ensure that existing **telecare** services work reliably over IP networks or are upgraded.

Watch this **video** from Steve Sadler, TSA's Technology Strategist, for the latest updates on the Digital Shift.



6. The policy context

There are a number of key national policies which set out plans for moving towards greater digitalisation and [digital](#) service delivery. These can be found in [Sources](#). In particular:

- The Care Act 2014 identifies [telecare](#) as a core component to deliver person-centered care and support to older and disabled people (Housing LIN and Appello, undated).
- The HAPPI 3 (Housing LIN, 2016) report also calls on housing associations to provide greater autonomy and control to for older people and to ensure that their accommodation meets their needs.
- In 2017 TSA published its 'white paper' Connecting People, Improving Lives A Digital Future For Technology Enabled Care? which highlighted (p3) the need to “build a roadmap that minimises disruption whilst harnessing the transformational opportunities offered by digital.”

7. The benefits of changing from [analogue](#) to [digital](#)

New and emerging technologies can improve services for older people, make information more accessible, and make their home environment more convenient. Other benefits include:

- Opportunities for greater integration of housing, health and social care platforms.
- The facility to collect more meaningful data to help provide more personalised services, achieve greater efficiency, and produce better outcomes.
- Improved predictive modelling, to provide advance warning and enable prevention of problems or interventions e.g. falls avoidance, hospital admissions/re-admissions, changes in medication, wandering, etc.
- Improving alarm call performance through faster response and better sound quality.
- Automated fault checking and reporting which is very limited with traditional [analogue](#) alarms.
- The facility for residents to make emergency calls at the same time.
- Faster and reduced costs of installation and maintenance.
- The facility to connect alarm devices via mobile communication networks which can provide diverse communication solutions and secure data connection.
- The use of mobile solutions also means that people can use technology through unobtrusive and convenient devices with which they are already familiar; and people can access the technology in different ways to suit their individual needs and preferences.
- The cost of remote support per individual to help with conditions that benefit from monitoring e.g. frailty/mobility, dementia etc. can be lower than that of traditional alternatives ([TSA, 2017](#)).

8. Key definitions

'Always On/Always Listening' devices	Devices always active, operating, or powered on with a digital connection
Analogue [services]	Services provided by connecting a device via a telephone network to a monitoring centre
Application Software (App)	Computer programme which performs a set of coordinated functions, tasks or activities
Artificial intelligence (AI)	Computer systems performing tasks which normally need human intelligence e.g. visual perception, speech recognition, decision-making, language translation etc.
Cyber protection	Protects networks, programmes and data from attack, damage or unauthorised access
Cyber threats	Attack, damage or unauthorised access to networks, programmes and data
Data pipe	Communications channel (line, wire, etc.) used to transmit data
Digital technology	Umbrella term for computer-based products and solutions.
Internet of Things	Network of physical devices, vehicles, home appliances and other items embedded with electronics, software, sensors, and connectivity which enables them to connect and exchange data
Internet Protocol (IP) technology	Communication network that sends and receive messages between one or more devices using IP data packets
Interoperability	Ability of different IT systems and software applications to communicate, exchange data and use this information.
Ofcom	Regulates TV, radio, video-on-demand, fixed-line telephones, mobiles, and postal services; and the airwaves over which wireless devices operate.
Smart voice/voice operable activation systems	Technology allowing individuals to control devices, systems and services through voice commands
Technology Enabled Care (TEC)	Telecare, telehealth, and telemedicine which enable people to live well, safely and independently in an environment of their choice
Telecare	Systems connecting emergency pull cords, personal alarms or other home sensors to a remote monitoring centre.

Telehealth	Remote capture and processing of vital signs and health-related information to enable monitoring of health conditions
Telemedicine	Video and phone connections between individuals and health practitioners, or between health practitioners, allowing monitoring and consultation of health conditions.
Voice Over Internet Protocol (VOIP)	Delivery of voice communications (e.g. telephone) and multi-media sessions via Internet Protocol technology over the internet.
Wearables	Where electronic technologies are incorporated into clothing or accessories to be worn on the body

9. Implications for housing related support providers

As a sheltered and retirement housing provider, you need to:

- Make sure you understand the implications (and the scale of impact) of **digital** switchover.
- Assess the capabilities and limitations of your existing systems.
- Explore the service and efficiency opportunities offered by digital solutions.
- Make key decisions e.g. whether to replace an **analogue** system with a **digital** one; or to redesign the whole system to benefit fully from the advantages and opportunities digital technology offers.
- Consider different economic models.
- Prepare by putting in place a timetable for making the transition from **analogue** to **digital**.

10. Key considerations

10.1 Leadership and responsibilities

- You should appoint a strategic lead for **digital** transformation and clear areas of responsibility as well as different formal opportunities for shared learning and problem identification and solving.
- Training of staff and service users (recognising the different skills levels) is essential as well as initial and ongoing technological support.

10.2 Consultation and communication

- Formal consultation should take place with staff, users of **telecare** services and their families and carers, and any other stakeholders including call centres, many of which (**TSA** accredited) are digitally enabled.
- Stakeholders should be meaningfully involved in the selection, design and development of new systems as well as in access arrangements in order to ensure that any new systems are both usable and accessible.

10.3 Assessment of current systems

- You will need to assess the capacity and capability of your current system and how it might need to change. Older systems will not work after the **digital** switch but more modern systems may be upgraded if they have certain capabilities. This might be a lower cost, medium term solution. In all cases it is important that system suppliers provide evidence of the reliability and compliance of their systems.
- You will need to consider the links with other equipment or systems e.g. does your alarm system link with the door entry or fire alarm system? This may impact on connectivity and compatibility.
- Some equipment providers will carry out surveys or audits of your existing systems, but these usually involve a charge and are inevitably an opportunity to promote new equipment and services.

10.4 Assessment of new systems

- You will need to assess the technological requirements of any new system including the underlying telecommunications infrastructure which may need upgrading.
- System and service **interoperability** and interface between existing IT systems (and possibly mobile networks) is important and may be more complex and challenging with multiple providers. There is also the potential for combining health, housing, and care networks, and with service users' home-based systems.
- Make sure you carry out research into different available systems and are clear about what is needed.
- Comprehensive service specification and procurement processes may be more complex involving a range of communication providers (**OpenReach** will supply '**data pipes**' only, so you will buy services that use these pipes, e.g. voice calls, from other communication providers) as well as a range of home based or portable devices.
- Make sure any new system has built-in flexibility and is future proofed (as far as any of this can be).
- Make sure you comply with relevant regulation and appropriate industry standards and best practice.

10.5 Costs

- Considerations include long term investment plans, cost benefit analyses, cost of changing, staff/service user training etc. It has been estimated that digitisation of **telecare** will need £150 - £300m investment over 4 years if **all** existing **analogue** systems were replaced with **digital** devices. ([TSA, 2017 p19](#)).
- Any **digital** strategy needs to be closely integrated and aligned with other organisational strategies and business planning activities
- Technology is likely to become more central to service delivery than it has previously; business processes and strategies may be designed around new and emerging technologies rather than adding technology onto existing strategies.

10.6 Planning

- Put in place an implementation plan which includes or takes account of:
 - Cost analysis and cost monitoring processes
 - Emergency provision - switching from **analogue** to **digital** may result in some alarm systems becoming unusable if the new system does not support transfer of **analogue** data to the call centre. With the use of **Voice Over Internet technology** for telephones there may be issues with '999 calls' e.g. if mains power or internet connection is lost. Alternative or 'back-up' systems may be necessary
 - Risk identification, assessment, and mitigating actions
 - Strategies for minimising disruption
 - Regional variations in terms of connectivity e.g. where broadband or mobile access is limited.
 - Transitional arrangements which may for example involve running **analogue** and **digital** systems concurrently
 - Testing and monitoring processes

10.7 Data protection requirements

- It is essential that any new systems which collect and store personal information are compliant with the new General Data Protection Regulation (see the erosh guide on the [new GDPR](#)).
- Put in place systems for preventing **cyber threats**. Digital connected services with increasing variations and greater accessibility are likely to present new security challenges resulting in the need for **cyber protection**, data control and storage, consent etc. particularly where information about service users is sensitive e.g. health and care records.

10.8 The 'human interface'

- Whilst technological solutions can help to transform lives and improve services and outcomes, they should not replace the 'human interface' between practitioners and service users. A carefully planned strategy and a whole system design approach should ensure that technology is used appropriately to achieve specific and clearly defined purposes and that human interaction is maintained where this has the greatest impact. In theory and, if planned appropriately, technological systems can be more efficient and save time which can be identified for quality human interaction where this is of most benefit.

11. Where to find further information

[NHS England](#) – digital technology resources

[Telecare Services Association \(TSA\)](#) – particularly the [Digital Shift](#) resources

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13. Your views and experience

As always, we are keen to collect your views and experiences. If you have anything to share in relation to digital switchover or any queries, please email Rebecca Mollart, ceo@erosh.co.uk or call 07803 176957.

14. Digital Switchover - Good Practice Checklist

Have you:

- Identified someone with strategic responsibility for digital switchover?
- Explored opportunities offered by digital solutions/researched different providers?
- Assessed capabilities / limitations of existing systems?
- Considered costs involved in upgrading existing systems/replacing with new systems?
- Consulted with staff, service users and other stakeholders?
- Put in place an implementation plan which includes risk management, emergency provision, testing, and transitional arrangements?
- Considered links with other organisational strategies / business planning activities?
- Considered links with other equipment / systems?
- Put plans in place for training staff and service users?
- Considered data protection implications and security issues
- Considered regional variations