Going Digital: a Technology Enabled Care Strategy for 2025

This strategy sets our direction for the next five years and develops the foundations needed to fully exploit the expected technological advances of the analogue to digital transition.

Lancashire
County
Council

Version Control

The following is a record of the changes/updates that have occurred on this document:

Version	Section	Changes/ updates	Date of change	Authors	Signed off by	Reason
V1	All	First draft	06/10/2020	Deborah Gent		

Contents

1. Forward

1.1.1	Our telecare service was established with a clear purpose: to enhance the quality of cost effective support and improve outcomes for individuals in their home, using technology as an integral part of the care and support process.
1.1.2	The purpose is as vital as ever. We will always be committed to ensuring safe, effective and compassionate high quality care, and encouraging improvement, but the world in which we operate has changed significantly since the service was first commissioned.
1.1.3	The COVID-19 pandemic has accelerated change. New and innovative types of service have started using new digital channels, and lockdown restrictions have changed how services deliver care. In this new world, we must also transform. We need to make changes to offer support that is even more relevant and that benefits everyone, while managing risk and uncertainty. The learning from our response to COVID-19 is feeding into new ways of working to put us in a better place for the future to provide remote and digital services which keep people safe.
1.1.4	Yet even before the pandemic, telecare was evolving rapidly. The digital switchover was creating opportunities for innovation as well as a number of service challenges.
1.1.5	This strategy sets out how Lancashire County Council (LCC) intends to transform its traditional telecare service into a technology enabled care (TEC) service, fit for the digital future. It is an ambitious programme that will introduce new and innovative technologies and digital approaches which enhance the experience and the outcomes for our service users.
1.1.6	Digital connectivity can enable a plethora of additional monitoring services, which in turn will assist people to maintain their independence for longer. New and emerging services will include: • New options for communication and networking that address loneliness and isolation, including: social media; video chat devices and services; services that convert speech to text or text to speech; • Trackables, such as mobile GPS devices and fall detectors can give people the confidence to go out of their homes knowing that if they get lost or fall the device can send a message to automatically raise an alert if users are outside of predefined 'safe zones'; • Wearables, such as step counters and activity monitors, help motivate some people and a wealth of smartphone apps can help manage a wide range of conditions including diet, nutrition, smoking, diabetes and emotional wellbeing; • Ingestibles include medical devices that are swallowed, such as cameras or medication capsules that release the appropriate dose at a precise location in the intestine. Some capsules even use the acids in

	the stomach as the power source, transmitting internal temperature, acidity and other measurements; • Unobtrusive sensors can also be deployed around the home and in clothing to help monitor the environment and personal activity to provide insights to family and professionals via data analytics and Artificial Intelligence applications. Alerts and prompts generated by these systems could help individuals to live in an environment that is safe and secure, with proactive and dynamic support; and • Perhaps the greatest opportunity to revolutionise the way people access support and care will come through the integration of the data and workflow across a range of such technology enabled care systems. Interoperability will therefore be central to our considerations for our future digital TEC service.
1.1.7	The big digital switchover is an opportunity to improve the telecare service in Lancashire and how it is delivered. Moving from analogue to digital TEC is much more than a simple replacement, it will be an opportunity for a fundamental redesign of our existing telecare offer.
1.1.8	Our current telecare service acts as a reactive alarm response service, with limited integration to other health and social care services. Moving forward, we will significantly widen the scope of this service to become preventive, proactive and fully integrated.
1.1.9	This document sets out our strategic intent to develop a digital TEC offer that is not just about the equipment. Our new approach will embed a complete service offer which includes supporting the assessment and care planning process and delivering a proactive and appropriate response.

2. Introduction

2.1 Business as usual is not an option

2.1.1	Telecommunications networks are changing in the UK, migrating from traditional analogue connections to a single digital network for voice and data services. The migration has started and is projected to complete by 2025.
2.1.2	For most people, the impact of this change will be minimal as most modern phones work perfectly for voice over internet protocol (VoIP) calls. But the change has significant implications for the technology enabled care (TEC) sector. Devices such as some older care alarms are only designed to work with the old PSTN technology and the TEC Services Association (TSA), which is the representative body for TEC services, estimates that around 1.7 million people who might otherwise require a number of domiciliary care services or a place in a care home rely on these sorts of devices to maintain their independence.
2.1.3	All of Lancashire's 14,500 current telecare users are connected to the alarm receiving centre through a home based alarm or hub, using analogue phone lines to exchange voice calls and limited, but critical data. Our service is operated as a 'standalone' service that is managed and maintained by operational staff and an ARC supplier.
2.1.4	Our current telecare service must transition to internet protocol based alternatives in the near future to avoid the disruption when all end users will inevitably migrate to all new digital landline products.

2.2 The benefits of moving to all-IP voice

2.2.1	The digital switchover will involve a significant amount of work. However, to focus on the disruption it may cause is to ignore the huge potential of digital services in delivering crisis and monitoring solutions fit for the 21st century. Today, digitally enabled care offers a vastly improved user experience from the typical analogue pull cords, pendant alarms and door entry systems of the past.
2.2.2	A new TEC system will include telehealth, social inclusion, self-managed care, digitally connected devices around the home, wearable devices, Internet of Things, cloud hosted applications and more, using a variety of digitally connected and increasingly intelligent devices around the person, their home and their mobile environment.
2.2.3	Digital solutions will transform the way people live, communicate and manage their own health and wellbeing. At the same time, they will offer the alarm receiving centres, health and social care staff deeper insights into people's needs, enabling them to offer better, more personalised support and housing options.

2.2.4	The potential benefits of a digital network fall into the following four main themes:

Reliability

- Increased service user safety through faster call connections and greater system resilience
- Fewer failed calls
- Works when user is on the phone - multiple simultaneous calls
- Can notify multiple alarm conditions
- Improved voice quality
- Regular automated system checks
- When conncectivity is lost this it picked up and notified to the alarm receiving centre immediately

Efficiency

- Provides a joined up view of a service user's data
- LCC could reap the cost savings, scalability and security of commissioning an ARC that utilises a cloud based platform
- Flexibility in TEC equipment location and sharing
- Lost equipment can be located
- Activations from safety detectors such as falls pendants can be notified to carers via mobile technology
- More efficient installation and device management via remote configuration portals
- Interoperability across platforms via open and non-proprietary protocols
- Increased use of automation to answer maintenance and system administration calls
- TEC services could be offered to clients using their own phones, either as a phone only 'entry level' service for low risk clients, or as an additional contact route for existing telecare clients who also have dedicated telecare devices
- The phone-only TEC approach could offer a lower cost service offering, helping to increase the uptake of TEC

Additional Functionality

- More advanced home and community monitoring
- Richer integration of devices and automation solutions that can be personalised
- Utilises the Internet of Things and wearables
- Video monitoring to the home
- Easier storage and sharing of information
- Opportunities to link equipment with customers own products such as Amazon Alexa
- Service users and and relatives will benefit hugely from a whole host of new digital technologies that promise to improve the lives and wellbeing of people.
- Remote programming of sensors and devises
- Introduction of proactive services, involving the ARC making outgoing calls to clients to provide advice aiming to improve health and wellbeing
- Can be used as an aid to promotes virtual healthcare
- Cloud platforms will allow far greater connectivity, enabling video calling between staff offsite, friends and family, and the alarm receiving centre

Advanced Data

- Digital "health hub" in the home
- Integration with telehealth devices
- Integrated view of user wellbeing
- Use of more advanced data analysis tools and artificial intelligence to help predict and possibly prevent incidents
- Deployment of apps promoting lifestyle, self-service, alert reminders or messaging services
- Data from several devices can be easily integrated and the data dash-boarded to provide a holistic view of an individual
- Data can provide an accurate analysis of a person's current and future needs
- Sharing of data between existing corporate and health IT systems
- Ability to integrate different TEC manufacturers' solutions and data into one dashboard

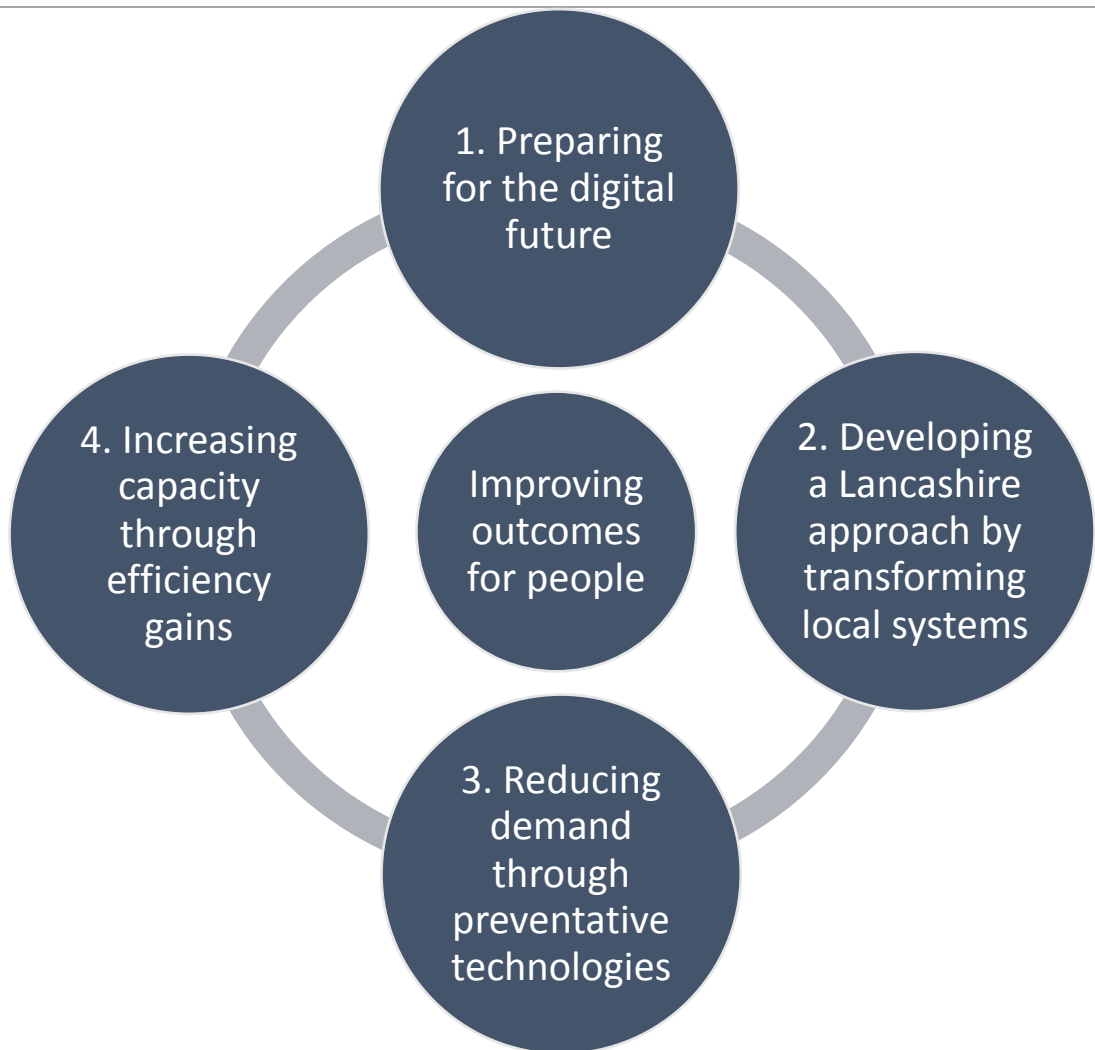| 2.2.5	This strategy sets Lancashire's direction for the next five years and develops the foundations needed to fully exploit the expected technological advances of the big digital switchover.

3. Our vision

3.1.1	Our vision is to have digital TEC at the heart of our health and social care mainstream offer, to: • Ensure people live safely in their own community and stay connected socially; • Improve outcomes for individuals by focusing on prevention, anticipation and supported self-management; and • Empower people to improve their wellbeing and maintain their independence for as long as possible.
3.1.2	We will deliver our vision by: • Putting the service user first, being person centred and outcome focused; • Being innovative and adapting to change; • Being ready for the big digital switchover; • Reimagining how we deliver and use technology enabled care; • Embedding a digital by design culture; • Using TEC to automate, fast, integrated and light solutions; • Adopting solutions that are scalable and sustainable; • Using open standards, open data, open source and open innovation; • Become more data driven; • Delivering value for money; • Applying GDPR principles when processing personal data; • Working collaboratively with health and social care partners across the ICS; • Offering solutions that aid diagnosis and assessment of treatment; • Promoting interventions which encourage behavioural change and self-care; • Promoting anticipatory care for newly diagnosed long term conditions; • Raising awareness and promoting the digital agenda within health, housing and social care; • Embedding TEC within all our strategic planning and service redesign processes; and • Routinely using measurement and evaluation for continuous improvement and service planning.

4. Our strategic aim and priorities

4.1.1	Our aim is to join up resources in the development and use of new digital technologies which empower staff and partners to support people as quickly and efficiently as possible.
4.1.2	Our strategy is built on four central and interdependent themes that determine the changes we want to make to our core service offer. Running throughout each theme is our ambition to provide the best, possible TEC service and experience for our service users.
4.1.3	

In the diagram:

- 1. Preparing for the digital future
- 2. Developing a Lancashire approach by transforming local systems
- 3. Reducing demand through preventative technologies
- 4. Increasing capacity through efficiency gains
- Improving outcomes for people

Priority 1 – Preparing for the digital future

4.2.1	From 'wearables', voice activated technology, automation, and robotics, to artificial intelligence and beyond, digital technology offers new opportunities to improve or transform provision and the aim is to be well placed to understand the opportunities and implement them where the case to do so is strong.
4.2.2	Our strategic objectives are: 1. To deliver a replacement programme for analogue telecare; 2. To put in place a process that identifies innovative solutions, products and approaches that address key local needs and priorities, and can be adopted at scale into mainstream 'business as usual'; 3. The integration of telecare, telehealth, telemedicine, telecoaching and self-care apps; and 4. Bringing inward investment in support of further improvements and innovations in technology enabled care.
4.2.3	We will: • Plan and intervene to minimise the impact of the digital switchover; • Phase out the use of analogue devises; • Move from fixed line solutions to mobile TEC; • Procure a new digital TEC service, with a single cloud based platform for sharing data and insight; • Move from an equipment based model, with a focus on hardware, to a new 2 or 3 tier service model; • Ensure all devises are interoperable and use open standards; • Transition to modern digital devices and apps, which offer the opportunity to connect to the 'Internet of Things'; • Understand, test and deploy new technology, including 3rd party devises such as smart phones, Fitbits and smart thermostats; • Use data and information innovatively, appropriately and ethically; • Generate connected data and share it via dashboards in Liquid Logic and the Lancashire Person Record Exchange Service (LPRES); and • Understand related risks and ethical issues but not let them become a barrier to action.

Priority 2 – Developing a Lancashire approach by transforming local systems

4.3.1	Call handling will be changed to make increased use of sharing of service delivery between health and social care partners. We are committed to driving forward our own strategy and when opportunities arise we want to do this in a co-ordinated way. We will support joint working in this area with partners including the NHS, Public Health, Community Protection, the voluntary and community sector, carers groups and housing authorities.
4.3.2	Our strategic objectives are: 1. To develop an integrated service delivery model for remote monitoring and response for all health, housing and social care needs across the county; 2. To develop digitally enabled pathways for epilepsy and other long term conditions; 3. To effectively support local co-created service transformation, address barriers and learn; 4. To enable young people to shape the design of digital health, care and support services; and 5. Raise awareness, engagement and adoption of digital technology within the housing sector and among third sector care providers.
4.3.3	We will: • Take opportunities to coordinate with health colleagues and other agencies to design seamless approaches; • Set up a stakeholder alliance/partnership and network across the health and social care system; • Integrate diagnostics to deliver a population health approach; • Hold information and intelligence securely; • Enhance connectivity between our care homes, our NHS partners and our social care providers; • Ensure leadership through digital champions; • Build trust and understanding across different sectors and negotiate barriers; • Ensure IT and software systems are able to exchange data, are scalable and able to adapt to change; and • Develop a digital leadership and workforce, ensuring investment in and access to up to date TEC and appropriate training in order to facilitate this.

Priority 3 – Reducing demand through preventative technologies

4.4.1	People need good information and advice about the range of technology that can support independence. Social workers, occupational therapists and frontline care workers will have the knowledge and digital skills they need to understand how new technology can predict and prevent a crisis.
4.4.2	Our strategic objectives are: 1. To deliver a service that prevents need from arising or escalating; 2. To enable people to regain skills, using TEC during their period of reablement, and when coming out of hospital; 3. To routinely collect and analyse TEC care data and evidence what works, as part of service planning, improvement and delivery; and 4. To have a response service that is of high quality and reliability, well linked in to our local communities.
4.4.3	We will: • Develop the TEC skills and knowledge of the Adult Social Care workforce; • Use technology to monitor people's wellbeing, their health and their environment; • Use artificial intelligence, predictive analytics and risk stratification to drive better decisions; • Use the insight from TEC data to reduce the risks of deterioration and associated harm and improve the safety of service users; • Use data from devises to effectively predict and prevent problems before they occur and stop/halt the need for more intensive and long term support; • 'Design in' technology as our first service offer; • Use TEC to defer or avoid completely the need for more intensive forms of care, and avoid 'crisis management' so service users feel safer and carers have the reassurance they need; and • Put systems in place to pick up when a trend might be starting that should trigger a short intervention to prevent someone's condition from deteriorating.

Priority 4 – Increasing capacity through efficiency gains

4.5.1	We will invest in TEC to prevent or defer the need for more costly forms of intervention. By capitalising on new and emerging technology we will develop new models of care and pathways that deliver transformation in quality and efficiency.
4.5.2	Our strategic objectives are: 1. To target funding and investment in new ways of working, new models of care and innovative TEC; 2. To balance the top down strategic direction and bottom up local ownership; 3. Invest in evaluation, data and analytics to support service change and deliver better outcomes for local people; 4. To integrate the use of low cost, mobile technology; and 5. To ensure interoperability so that TEC can be customised and people can "bring their own devices".
4.5.3	We will: • Move away from a model that is driven by service user numbers to one that is valued for its impact; • Understand the economic cost and the return on investment of TEC; • Explore the cost implications of the upgrade to digital equipment and roaming SIMs; • Understand the social benefits of TEC and targeting resources accordingly; • Use TEC to meet the challenges of rising demography and increasing complexity; • Look to introduce clear and consistent charging arrangements for LCC TEC services; • Ensure practitioners are able to access case summaries, aggregated analytics and TEC data dashboards in Liquid Logic and across all health records; • Direct alerts to the most appropriate responder, whether that be a family member, a key holder or a member of the mobile response team; • Increase automation across the health and social care economy through the use of digital solutions and technologies, including the use of mobile technologies; and • Use data accrued from public, private and individual sources to develop more targeted public health interventions, reducing the burden on the health and social care system.

5. Delivering change, monitoring progress and measuring success

5.1.1	The shift from analogue to digital communications networks will create new service and data models, which will help LCC to: • Embrace the opportunities for procuring and operating technology in a digital environment; • Plan for changes to service delivery that are essential to digital TEC; and • Design integrated digital solutions.
5.1.2	Transitioning services and customers from the public switch telephone network (PSTN) to an all-IP voice and data universe creates opportunities in terms of vulnerable users being 'always connected' to their care community, and the prospect of services which can be more proactive in nature.
5.1.3	Consumers of technology enabled care will benefit from access to a broader range of integrated services, smart home systems and the ability to network and share information with family members and carers.
5.1.4	LCC will offer new proactive services, based upon richer datasets, guided by analytical engines and artificial intelligence, creating the opportunity for TEC services to be considered as a mainstream care service, where the data is incorporated in care records.
5.1.5	LCC will target the principles of interoperability as we shift to digital, so that Social Workers and service users can select the optimal combinations of technology devises and integrate the person's own 3rd party devises to deliver intelligent monitoring and a virtual presence.
5.1.6	Today, digitally enabled care offers a vastly improved user experience from the typical analogue pull cords, pendant alarms and door entry systems of the past. This new strategy will ensure that LCC: • Delivers a real time and life critical monitoring service; • Supports self-management of health and wellbeing; and • Delivers alerts to inform proactive service delivery.

6. Our Plan

Issue	SMART Output	Actions required	Lead	Timescale
Priority 1 – Preparing for the digital future				
Priority 2 – Developing a Lancashire approach by transforming local systems				
Priority 3 – Reducing demand through preventative technologies				
Priority 4 – Increasing capacity through efficiency gains				