

Connected Care

How mobile connectivity can help councils overcome the challenges of delivering adult social care



Mobile^{UK}



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Foreword

Adult social care in England is under great strain. Even before the Covid-19 pandemic, local authorities have faced increases in demand as a result of an aging population. At the same time, councils have seen significant cuts in resourcing. This meant that local authority care budgets were under growing pressure, pushing the whole system close to breaking point.

Technology could be part of the solution to this growing challenge. Technology is already reshaping the way adult social care services can be and are being delivered, with the expectation of even more rapid advances just over the horizon.

We have seen technological innovations in adult social care start to change the landscape – both in terms of the experience of those being cared for, as well as the cost and efficiency of delivering services. For example, predictive technology may help to reduce social care needs by identifying citizens at risk early enough to implement preventative measures, potentially solving issues before they start.

Using technology more effectively could help both improve outcomes for residents and increase efficiency in the system. However, these benefits will only be realised if local authorities are empowered to innovate and to take advantage of technologies as they emerge in years to come.

Investing in digital infrastructure and specifically mobile connectivity, will enable transformational changes to public services including adult social care. With these foundations in place, the potential of connected care can be realised. Local authorities play a significant part in the rollout of mobile technology, providing the conditions to collaborate, innovate and drive forward change.

As Digital Champion at Central London Forward – the partnership of the 12 central London local authorities – I work closely with our member Boroughs, to help them share best practice, to work together, and to harness the huge potential benefits of increasing mobile connectivity, smart data, the Internet of Things (IoT) and 5G.

Where local authorities have appointed a Digital Champion to focus on delivering digital connectivity and digital adoption, it is proven that a far smoother experience of rolling out mobile connectivity will be experienced. We have seen how Digital Champions at local authorities can play a crucial role in highlighting the benefits and opportunities of digital investment, and in building more effective relationships both within councils and with telecommunications providers.

But while we need to focus on seizing the opportunities offered by digital technology, we also need to recognise its limitations. Whilst better use of technology could help improve care services – it alone cannot solve the care crisis. Crucially, we need to ensure that there is sustainable funding for local authorities in order to meet the growing demand for social care and ensure high quality services.

I believe that mobile technology offers huge potential to aid the delivery of adult social care and am looking forward to working with Local Authorities and Telecommunications Providers to realise these.



Nicola Egan
Digital Champion
Central London Forward

Key Messages

1 Mobile connectivity offers huge potential to aid the delivery of adult social care.

For example, only 40% of social care providers are fully digitised, with the rest using paper records. With greater adoption and use of digital technologies and processes, there are opportunities to meet the multiple challenges of funding constraints, increased demand, problems with the recruitment and retention, and the morale of the social care workforce.

2 Significant advances are being made in digital technologies that are enabled by mobile connectivity.

These advances enable councils to deliver adult social care more cost effectively, without compromising on quality. One example is the range of new digital devices that will mean residents can live independently for longer. For every week that someone can stay living independently rather than going into residential care, a council could save £648 a week, or £33,700 a year (or 80% of cost). Another example is remote care. A trial has found that remote monitoring to ensure that medication is taken means a 60% reduction in hospital admissions.

3 The digitisation of the adult social care sector – delivering connected care – will help with recruitment and retention of staff and in the procurement of services.

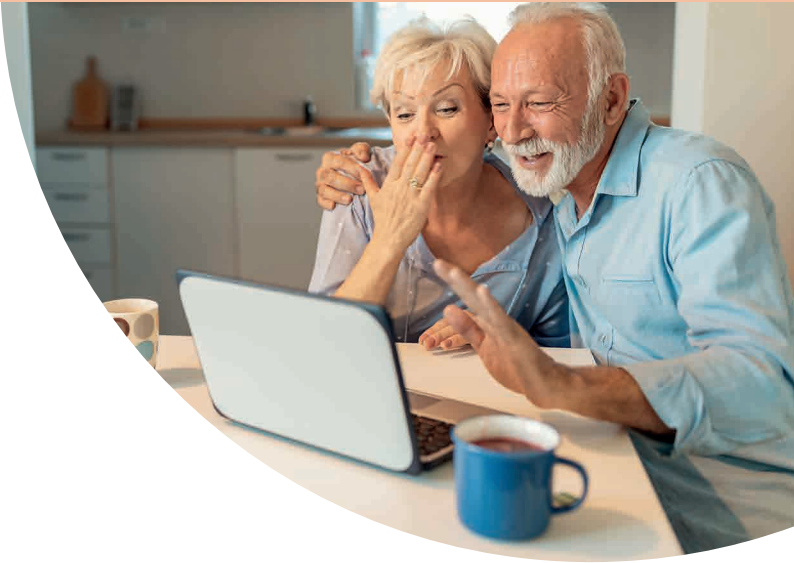
Digitisation will help to attract and retain staff through better working conditions and upskilling, shape better provider markets and bring new commercial opportunities. More than a third of councils are using entrepreneurial methods in areas such as waste, leisure and tourism, IT/back office and housing, and could do the same with connected care.

4 The potential of connected care will only be realised with good quality mobile connectivity.

Councils can ensure the highest quality mobile connectivity is available by working with the telecoms providers; referencing the importance of mobile infrastructure to economic development and social inclusion in all Local Development Plans; continuing the promotion of full-fibre deployment to facilitate mobile and 5G rollout.

5 Councils should appoint a Digital Champion to turn the vision for connected care into a reality.

Appointed Digital Champions can help set the local strategy and policy around digital connectivity, raise awareness, advocate for connectivity, and coordinate both internally and externally with the council itself and telecommunications providers. Digital Champions could influence and guide the 56% of senior management teams in councils yet to formally discuss the impact of 5G on their local authority, despite recognising the transformative effect it could have within environmental, housing and social services.



Introduction

Why councils need connected care?



5G-enabled telecare will reduce council social care budgets by 5%, saving £890 million.

This report explains how applications and mobile connectivity are enabling councils to address the challenges they face in the delivery of adult social care. These applications can further enhance budgetary constraints, increase efficiency, improve the experience of those receiving care, and open up new commercial opportunities.

The UK's mobile network operators are currently investing heavily in their networks and are working towards extending 4G coverage to 95% of the UK's landmass. In addition, next generation 5G networks are being rolled out across our urban areas, further enhancing capacity and capabilities.¹

This improvement boosts the capability of our digital devices, such as smartphones and tablets.² But it will also drive the adoption and use of transformative digital technologies, bringing significant economic and societal benefits, such as carbon-reducing smart electricity grids, accident-preventing connected vehicles and cost-reducing Internet of Things (IoT) industrial processes.³

But councils will only reap the benefits of enhanced digital connectivity and applications to assist with the delivery of social care if the highest quality mobile connectivity is available in their areas. This view is widely shared.

For example, the Department of Health and Social Care's white paper on adult social care reform states that building the right digital and data infrastructure is essential if digital applications are to support adult social care delivery.⁴ Research commissioned by the NHS Transformation Directorate recommended that development of digital infrastructure – including 4G and 5G – should be part of a national vision to support digital uptake in the adult social care sector.⁵

Councils play a crucial role in ensuring that digital infrastructure gets built, thus providing the conditions for connected care (the digitisation of the adult social care sector – to take place).

Within this context, the following chapters describe:

The challenges councils face in delivering adult social care.

How mobile connectivity can help councils overcome challenges and deliver more cost effective and higher quality adult social care.

Case studies on how mobile connectivity is beginning to deliver connected care.

Conclusions and recommendations on how councils can turn the vision of connected care into reality.

The challenges facing councils in delivering adult social care

Councils face numerous, often interlinked, challenges in the delivery of adult social care. Three of the most prominent are:

1 A prolonged period of constrained funding. While some new revenue streams have helped to ease budgetary constraints in recent years (Councils have been given the power to add a Social Care Precept to council tax bills and the Government has introduced the Health and Social Care Levy), it is estimated that councils still face a funding gap – the difference between the investment that adult social care receives and the investment that it needs – running into billions of pounds.⁶

2 Demand for services has been rising and will continue to rise. The Office for National Statistics has estimated that the number of people living in the UK aged 65 and over will increase from 12.3 million people in 2019 to 17.4 million people in 2043 (growing from 19% of the population to 24%).⁷

3 Multiple pressures on the adult social care workforce. A Government survey of social care settings found a large majority stating that the environment for retaining and recruiting staff, maintaining staff morale and accessing agency staff was more challenging than six months previously. Among providers that offered support in the home, the top three reasons for staff leaving were: better pay outside the care sector (29.1%), better hours and working conditions outside the care sector (11.5%) and feeling burnt out/stressed (10.2%).⁸



Councils have taken action to respond to these challenges. For instance, efficiency initiatives have been introduced and service transformation has been undertaken to address constrained funding. It has been estimated that the cumulative total of savings made within council adult social care services has been £8bn since 2010.⁹

While these efficiency initiatives help to make the adult social care system more sustainable, they are not going to overcome the sector's challenges on their own. The Local Government Association has warned that, without greater investment, councils will face a struggle to balance budgets and to provide timely and quality care to those who need it.¹⁰ Indeed, research from the Association of Directors of Adult Social Services in May 2022 found that more than half a million people were waiting for assessments, reviews, and/or care support to begin.¹¹

Clearly, the status quo in social care is not an option. A different funding package for adult social care is necessary to address the challenges set out above, as well as wide-ranging reform of the sector.

Digital technologies that are enabled by mobile connectivity are part of the answer, as they can support cost efficient and higher-quality social care provision, as well as a reduced cost burden for councils, both now and in the future.

Connected care

The role of mobile connectivity in adult social care

Mobile connectivity is already enabling the use of digital applications within adult social care:¹²

- The adult social care workforce now relies on digital devices. Staff in both care homes and domestic settings regularly use tablets and smartphones in their daily working lives.
- People with care and support needs use digital technology to improve their quality of life, including electronic reminders for medication, and video cameras around the home for safety (which are also tools used by unpaid carers).
- Adult social care providers use video calling software, tablets, smartphones and sensor monitoring equipment.
- Local authorities use mobile tablets and care scheduling software.



Only 40% of social care providers are fully digitised, with the rest still using paper records.¹³

These applications provide huge benefits for councils – better quality of care, improved health and wellbeing outcomes for residents, and a more productive workforce.¹⁵



Nevertheless, there is still some way to go for the adult social care sector to be fully digitised. Only 40% of social care providers are fully digitised, with the rest still using paper records.¹³

The adult social care sector and policymakers understand the need to digitise. For instance, adult social care providers – on the whole – are looking to adopt digital care management systems and sensor monitoring technology; the Government is pushing the adoption of Caretech and Digital Social Care Records within the sector.¹⁴

Connected care

The emerging digital applications that can help councils with the challenges of delivering connected care

While existing digital applications need to be adopted further within adult social care, there are new digital services emerging at a rapid rate, becoming more accessible and more usable. These offer opportunities for councils in the delivery of adult social care (several of which have real-world examples that are already showing benefits):

- 1. Boosting the adult social care workforce.**
- 2. Reducing the costs of adult social care delivery.**
- 3. Developing more effective care provider markets and commercial opportunities.**
- 4. Supporting local interventions that alleviate pressure on the adult social care system.**

1 Boosting the adult social care workforce.

Digital technology can help councils build a more skilled social care workforce, that has higher morale and ensures greater staff retention. One example is the Care City test bed – a pilot of innovative technology in East London – which found that training staff in the use of digital technologies provided opportunities for care workers to develop new skills that improved job satisfaction and helped staff develop their career goals.¹⁶ Another example is set out in Box One, describing a trial of sensor technology by a South London council where the work of the council's Independent Living Officers has been made more impactful by using data insights.

2 Reducing the costs of adult social care delivery.

Digital technology will allow councils to do more with less. For example, digitally powered remote consultation will mean staff not having to accompany residents to medical appointments; digital record keeping will mean quicker access to better information for those in care, and more data collection and insights from that data will allow more preventative action. A study of electronic care planning found 77% of users saved time from the system, the top benefit, ahead of improved communication (76%) and better care (46%).¹⁷ More generally, a key benefit of digital technology is that it is expected to support independent living for longer – this will mean better care for those that need it as well as huge savings for councils.

Digital technology enables local authority own-provision of residential care to produce savings of up to 80%.¹⁸

Connected care

The emerging digital applications that can help councils with the challenges of delivering connected care

3 Developing more effective care provider markets and commercial opportunities.

Understanding what digital technology can do to support the provision of adult social care can be an important part of local market shaping, stimulating care providers to trial and adopt innovative new ways of delivering care. By doing this, councils can also create examples of best practice for other councils to adopt. They could even develop services that can be sold to other councils.¹⁹ More than half of councils (57%) operate a joint venture with the private sector, and more than a third of councils are using entrepreneurial methods in areas such as waste (46%), leisure and tourism (38%), IT/back office (38%) and housing (36%). As with these areas, there is no reason why a council that develops a digital technology system that supports adult social care cannot then sell that product to other councils.²⁰

4 Supporting local interventions that alleviate pressure on the adult social care system.

There are examples of councils planning to utilise digital technology to empower the local voluntary and community sector, reduce loneliness and isolation, promote active and healthy lifestyles, tackle homelessness and support suicide prevention.

“Digital technology can be utilised to empower the local voluntary and community sector.”

Box One: A case study of councils using mobile connectivity to deliver adult social care



The London Borough of Sutton is trialling how the Internet of Things (IoT) can support at-risk people to live safely in their own home. A battery-powered sensor is placed in the kitchen of a resident, continuously collecting humidity and temperature readings, and reporting the data to a central database every four hours.

The data is used to establish what “normal” resident behaviour looks like. When behaviour deviates from its normal pattern, the system detects it and notifies council staff, with amber and red alerts to show the degree of escalation needed.

The trial has already had some success. There have been multiple instances of interventions being made that would not have otherwise occurred, and the system has saved four lives to date. Numerous cases of fuel poverty have been identified from data showing dropping temperatures in a resident's home. Several successful nutrition and hydration check-ups have been triggered by the data, leading to residents being encouraged to improve their self-care.

Key to the trial's success has been the collection of actionable information that is presented on a data

dashboard. The council's Independent Living Officers (ILOs) can be proactive, rather than waiting for something to happen. As a result, Sutton's ILOs have changed how they organise their workload, with their jobs becoming more time efficient and effective.

The data dashboard that ILOs use alongside the IoT was co-designed with the system provider, maximising the benefit of the information gained from the sensor data. Good quality data visualisation has proven so invaluable that it has been incorporated into future rounds of procurement.

Reliable connectivity is crucial to the IoT device working and data being collected. Without connectivity, data would not get consistently recorded, and patterns of resident behaviour would go unnoticed.

Case studies

How mobile connectivity is helping deliver connected care

The following pages set out examples of digital technology that can support the delivery of adult social care, that is enabled by high quality mobile connectivity, with the potential of this technology even greater with 5G mobile connectivity.

Remote consultation / diagnosis

Medical professionals can interact with patients when they are not in the same location, usually via video link. For obvious reasons, this became much more widespread during the pandemic. Remote consultation can involve more than just a high-level discussion about medical issues. For instance, high resolution photography, video, thermometer and otoscope readings can be undertaken with digital technology.²⁸

Where a 5G connection is available, it can provide enhanced digital connectivity and even more reliable connections to do remote consultation and diagnosis.

Councils will then benefit from quicker diagnosis and more productive staff.



Table One: The benefits and case studies of remote consultation / diagnosis

Benefits of digital technology	Case studies and statistics
<ul style="list-style-type: none">• Quicker access to medical support for those who need it.• Increased access to specialist consultations, regardless of geographic location.²¹• Less travel for staff accompanying patients, meaning lower costs and lower carbon footprint.• Less clinic and hospital visits for those receiving care, raising quality of life.• More inviting working conditions for carers.²²	<ul style="list-style-type: none">• O2 research – has estimated that 5G-enabled telecare will reduce council social care budgets by 5%, saving £890 million, which could be then reinvested in social care (or other council services).²³• West Midlands 5G – has trialled 10 care homes receiving full GP consultations and assessments remotely. Through connected diagnostics tools GPs are able to view and record clinical information and check residents’ vital signs remotely in the same way as they would face to face.²⁴• 5G-powered COVID-19 testing unit for Scottish care homes – has trialled the tracking of COVID-19 at six care homes in Glasgow, capturing the data of 550 residents and care home workers over three months.²⁵• West Mercia Rural 5G Project – conducted a study to evaluate the experience and use of a digital connected camera to provide welfare support and expert advice remotely.²⁶• Ericsson research – Consumers were frustrated with inconveniences and doctor wait times; 39 percent of chronic patients prefer online consultations to face-to-face meetings.²⁷


Case studies

How mobile connectivity is beginning to deliver connected care

Remote monitoring, data collection and support

Digital technology can collect a whole range of data in a variety of contexts to help those within the adult social care system. Wearable devices use sensors to send out alerts if an individual suffers a crisis or health emergency, such as a fall; big data analytics can gain more insight into the drugs taken by patients and how they react to them²⁹; and interactive technologies can help to address problems such as loneliness.

Councils will benefit by being able to target scarce resources more effectively to those most in need and act to prevent issues arising, rather than having to react.



Medication taken via a 4K video link reduced the chance of the wrong medication being taken by 50% in Liverpool trial.

Table Two: The benefits and case studies of remote monitoring, data collection and support

The benefits of digital technology	Case studies and statistics
<ul style="list-style-type: none">• Preventative interventions will be more straightforward.• Ongoing patient care will be made easier.• Greater opportunity for early hospital release, reducing costs.• Better adherence to medication and prescription regimes, creating savings from reduced medication wastage and fewer hours of care.³⁰• Predictive maintenance of telehealth equipment, lowering costs of maintenance and repair.³¹• Reduced loneliness.	<ul style="list-style-type: none">• 5G Barcelona – has deployed emotional robots to the homes of 12 elderly people. The robots are designed to create company for users; they can follow individuals and engage them in conversation.• Liverpool 5G trial – a trial monitored people taking their medication via a 4k video link, ensuring the medicines are taken correctly. This led to a 50% reduction in people given the wrong medication or taking the wrong dosage, and a 60% reduction in those attending hospital. This led to cost savings of over £2,000 per user per year.³²

Case studies

How mobile connectivity is beginning to deliver connected care

80% of people would like to see faster and more secure access to digital patient records, including the ability for patients to access their own records remotely.³⁷

More secure, more accessible information

Collection of patient data, combined with patient and practitioner access to real-time and historical information, may help emphasise early intervention and proactive solutions, as opposed to reactive treatments.³³

Councils will benefit from better record keeping by having better information that can be recorded more quickly, and therefore allowing more time to be spent on patient care, rather than on bureaucracy.

Table Three: The benefits and case studies of more secure, accessible information

The benefits the digital technology will bring	Case studies and statistics
<ul style="list-style-type: none"> • Input into social care records from patients and family. • Improved billing and care management systems via integration of data and services are expected to give patients greater control over care and access to cost and billing information.³⁴ • Patients receive better care due to more reliable networks and use of smart machines that may be less susceptible to breakdowns or downtime. • “Moving people’s care records from paper to digital formats is one big step forward. When a person receiving care has a Digital Social Care Record (DSCR), all the care and health professionals looking after them can update their records in real time, giving everyone the right information at the right time. But DSCRs are only really useful if there is reliable, fast, secure internet connection between care providers and other care and health professionals in all their different locations.”³⁵ This leaves more time for hands-on, person focused care. 	<ul style="list-style-type: none"> • Cumbria County Council – an e-Health software system has been implemented to share patient records across health and social care agencies. It was commissioned by Adult Social Care, Cumbria County Council and Cumbria Clinical Commissioning Group. The software has reduced e-referral processing times between Adult Social Care and the acute and community health services.³⁶ • Vodafone research - 80% of people would like to see faster and more secure access to digital patient records, including the ability for patients to access their own records remotely.³⁷



Conclusions and recommendations

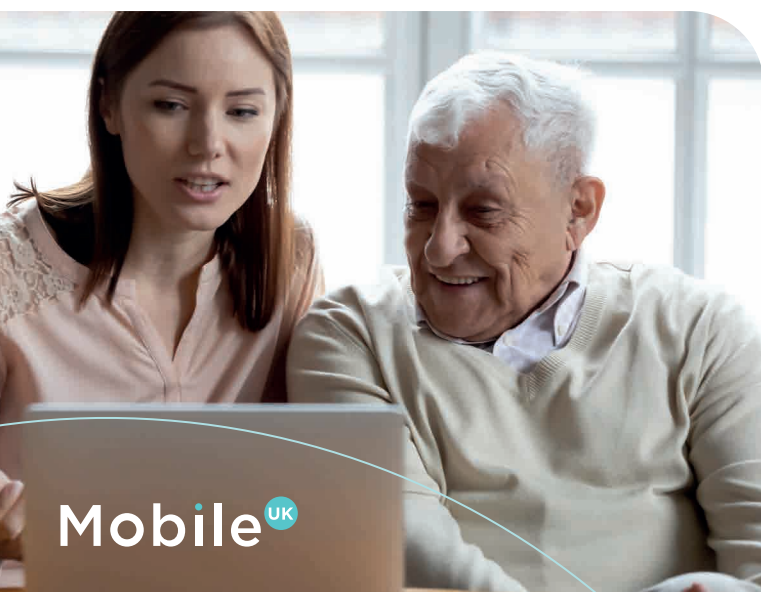
Turning connected care from vision to reality

Mobile connectivity enables the applications that are fundamental to the efficient delivery of adult social care services.

The power and capability of these applications are only going to increase with better mobile connectivity. But only concerted action - which does not always happen - will be able to take advantage of this increased power and capability. For example, a survey found that 56% of senior management teams within councils are yet to formally discuss the impact of 5G on their local authority, despite recognising the transformative impact it could have on environmental, housing and social services.³⁸

There is huge potential for councils to do more to adopt new digital applications and also to ensure the highest quality mobile connectivity is available to support them.

The ability of councils to “do more” should not be underestimated. Councils can set local strategy and policy around digital connectivity, raise awareness, advocate for connectivity, and coordinate both internally (within the councils) and externally (with telecommunications providers).



Recommendations

Specifically, councils can boost mobile connectivity by:

Putting infrastructure at the heart of all Local Development Plans to reference the importance of mobile infrastructure to economic development and social inclusion.

Appointing a Digital Champion, who can focus squarely on delivering connectivity and digital adoption, but also sell the benefits and opportunities of digital investment. Research suggests that councils that have appointed Digital Champions have had significant success in speeding up rollout and improving relationships with telecommunication companies. Mobile UK's own research has found that planning approval rates also tend to be higher where councils have put in place Digital Champions or schemes to promote mobile connectivity.

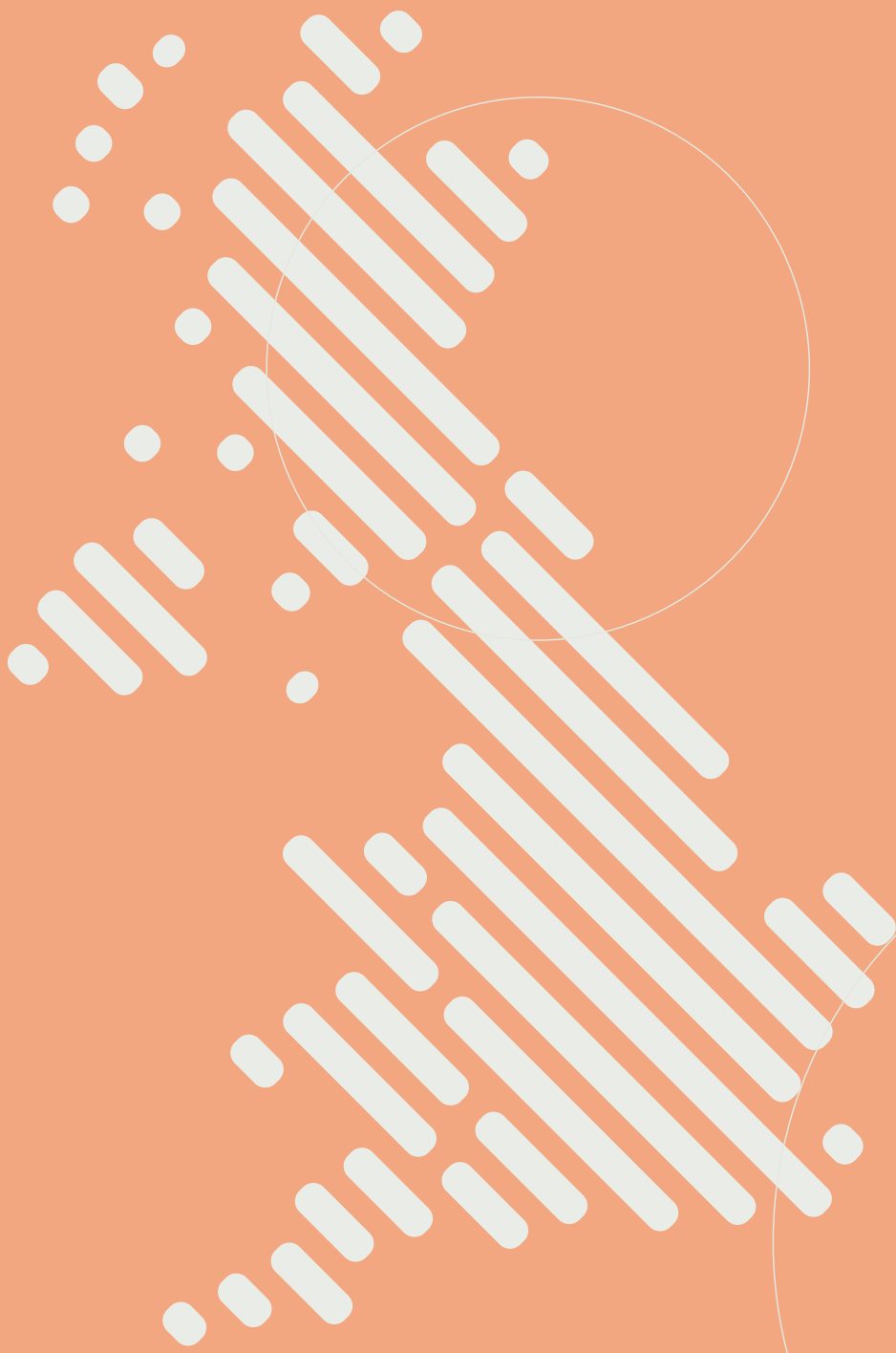
Continue promotion of full-fibre deployment to facilitate mobile and 5G rollout.

In addition, councils could lobby national government for:

- Support with the transition to adopting digital applications in adult and social care.
- All public bodies, not just local authorities, to make available their assets for siting mobile apparatus on Electronic Communication Code Terms.
- Introduction of business rates relief for new mobile infrastructure development, especially in harder-to-reach areas.

Endnotes

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