Connecting today for tomorrow

Future proofing real estate through digital connectivity

CLUTTONS

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"The Government is committed to delivering lightning-fast, reliable broadband to everyone in the United Kingdom and making the country a global leader in digital connectivity."

Julia Lopez, Minister of State, Department for Culture, Media and Sport, 2021

"The power of 5G and future telecoms advances will unlock new solutions in everything from industry to healthcare. Falling behind in coverage will mean falling behind in international competitiveness when it comes to the technologies of tomorrow, and failing to provide British people with innovative, life-enhancing services on secure, resilient networks."

Julia Lopez, Minister for Data and Digital Infrastructure, April 2023

Introduction

The importance of the UK's digital connectivity is frequently highlighted by policymakers. The continued drive to ensure that the UK's connectivity is upgraded and expanded is key to underpin business success, social connections, and economic growth across the country.

The need to ensure digital infrastructure across the UK will not only work today, but also cope with future technical advances is clear. And when it comes to individuals and businesses considering future-proofing their home or company, connectivity – whether that is broadband delivered by full-fibre or upgraded coaxial cables, or 5G technology – can sometimes be overlooked, despite being the key to delivery and running of all technical devices.

Take, for example, the increasing demand for high tech devices among households – from remote lighting or heating technology to smart fridges, not to mention VR gaming and mobile phones and ipads. **As households ramp up the number of connected devices** in their home, the need for connectivity and capacity will be greater.

Another example in the commercial sector is the focus among businesses and asset owners to meet their ESG targets. To help them assess the results of their increased efforts, especially around environmental issues, means increased monitoring. **ESG monitoring can't work without high-grade digital capacity.**

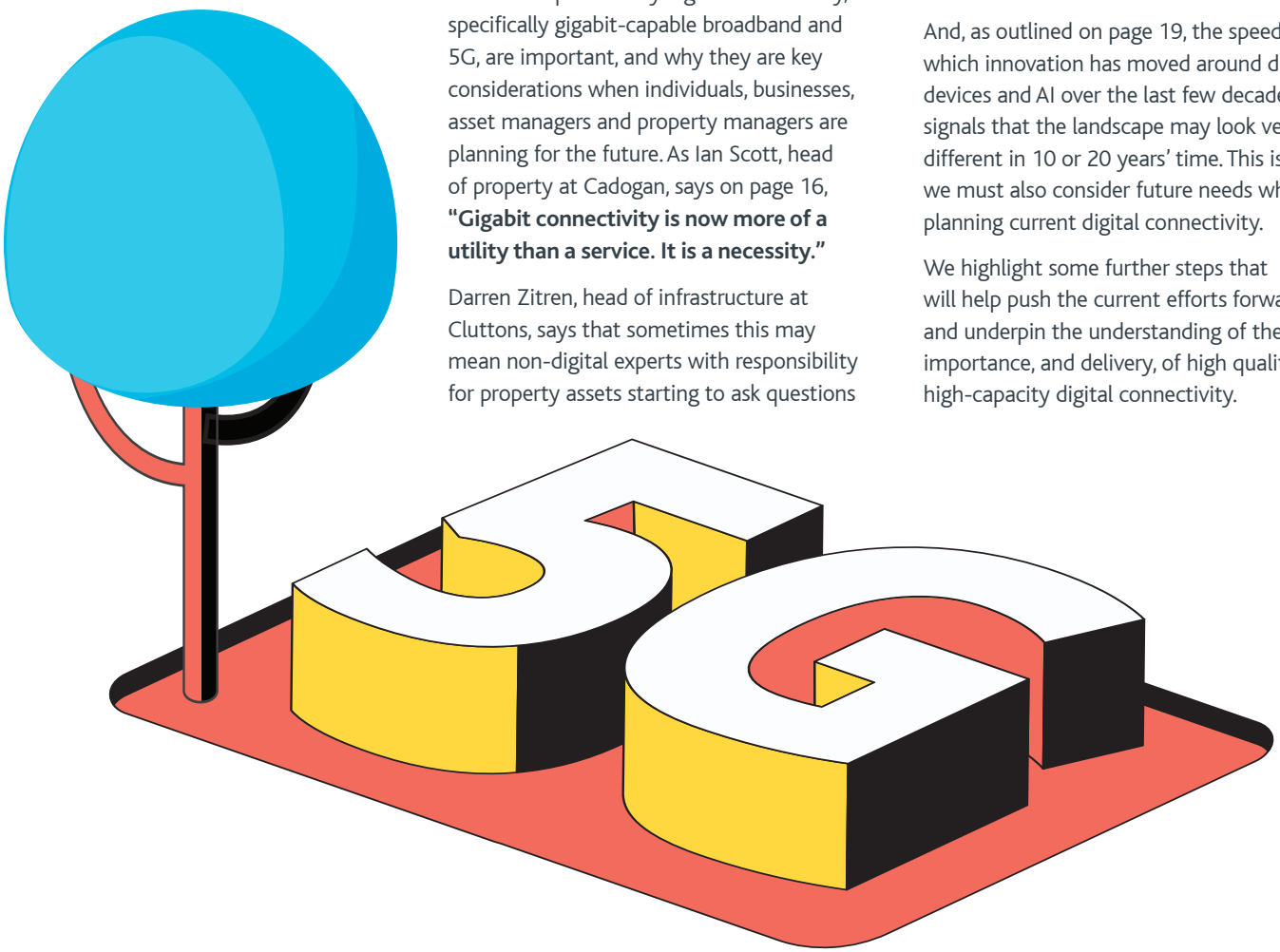
In this report we aim to highlight these and other examples of why digital connectivity, specifically gigabit-capable broadband and 5G, are important, and why they are key considerations when individuals, businesses, asset managers and property managers are planning for the future. As Ian Scott, head of property at Cadogan, says on page 16, **"Gigabit connectivity is now more of a utility than a service. It is a necessity."**

Darren Zitren, head of infrastructure at Cluttons, says that sometimes this may mean non-digital experts with responsibility for property assets starting to ask questions around future-proofing. "The language around connectivity can be a barrier. Cluttons has been managing the property aspect of connectivity for 25 years, over which time we have seen an abundance of technical terms emerge. Overlay this with property's love of an acronym and the whole topic can become difficult to navigate." We have endeavoured to simplify this on pages 8 & 9.

The business and social needs for connectivity are starting to be more fully understood, but there are **financial implications too.** On page 17 we interview Jules Barker, global director of product at WiredScore. He explains research conducted with Moody's showing the difference in rental and lease performance for the highest rated buildings – underlining that providing the best connectivity now and into the future has tangible financial benefits.

And, as outlined on page 19, the speed at which innovation has moved around digital devices and AI over the last few decades signals that the landscape may look very different in 10 or 20 years' time. This is why we must also consider future needs when planning current digital connectivity.

We highlight some further steps that will help push the current efforts forward and underpin the understanding of the importance, and delivery, of high quality and high-capacity digital connectivity.



Focus on: broadband

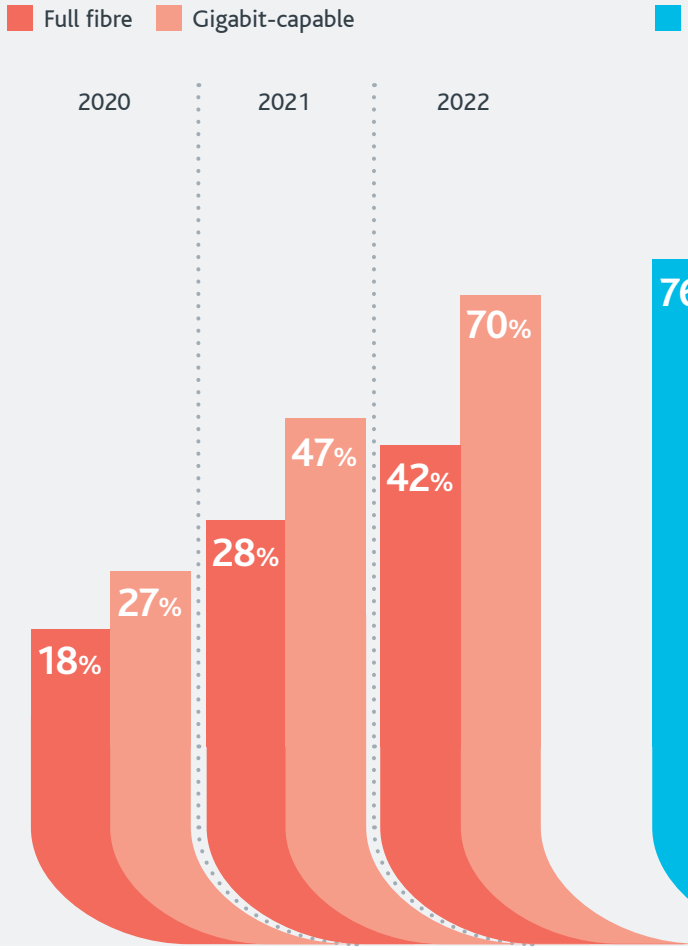
The roll-out of gigabit-capable broadband, via full-fibre and upgraded cables, to the UK's homes has gathered momentum over the last few years. The latest data from Ofcom signals that 70% of homes now have access to gigabit-capable broadband, a rapid rise from 27% in 2020. Full-fibre connections have risen from 18% to 42% over the same period.

As the chart shows, this coverage varies between urban and rural locations – a key reason why the government has pledged £5 billion to roll-out gigabit-capable broadband to the hardest to reach places.

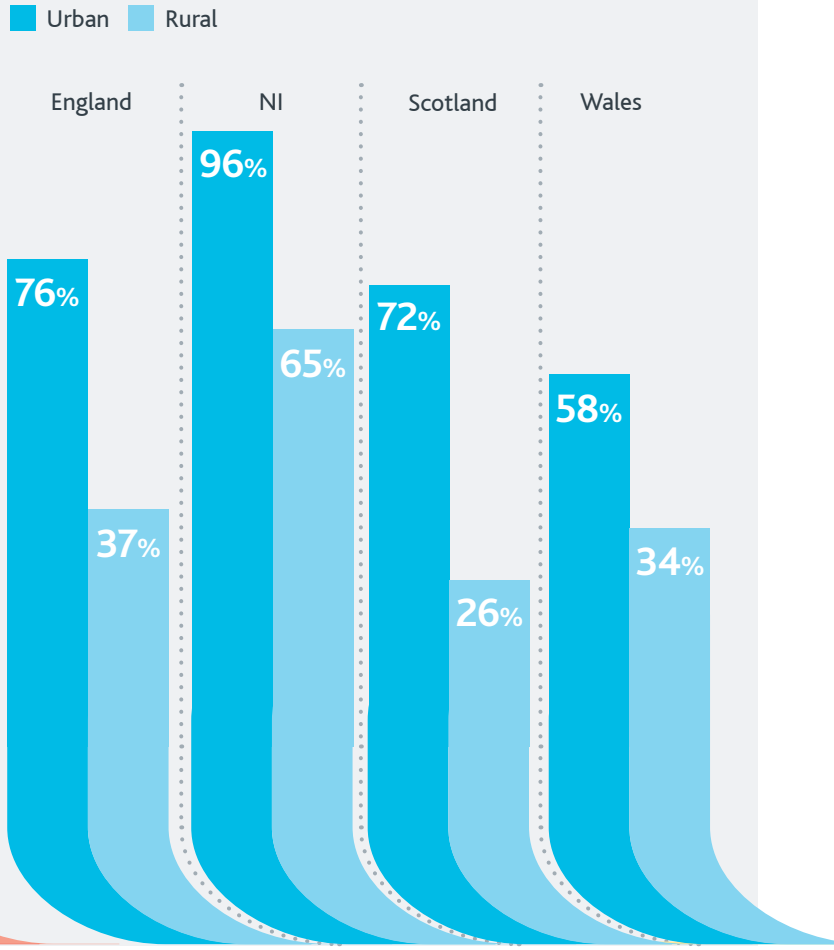
The current Government target for gigabit-capable broadband is that it will available nationwide by 2030. There is less detail for coverage for commercial premises, although Ofcom indicates they will be looking at this shortly. The verdict seems to be that the Government's goal is achievable. A recent report by the National Infrastructure Commission (NIC) said progress has been "rapid", and that with current levels of investment the Government should meet its target.

This rapid progress is needed, as demand for connectivity is only likely to increase, especially in homes and offices which tend to use fixed cable broadband as their main source of connectivity. As the chart on the next page shows, monthly broadband use has risen sixteen-fold in the last decade. The map below also highlights that where faster speeds are available, data use is even higher. It would be risky to draw a direct correlation here between the ability to use more data and pent-up demand in areas where connectivity levels are not as high.

Broadband connectivity in the UK, residential
Proportion of homes with:



The rural divide
Gigabit-capable connections by type of area



Source: Ofcom, Connected Nations 2020, 2021, 2022

But it does signal that faster broadband, which by its speed means more data can be transmitted, thereby increasing capability, opens the way for increasing use of devices and technology both in an office and domestic setting.

It is also worth noting that upload speeds, needed for things such as video calling and backing up data, are much faster where gigabit connections are used.

Another key benefit of gigabit-capable broadband is its low latency – which means that the information gets from A to B more quickly, as outlined on page 9.

As we examine on page 19, the rapid advances in technology signal that more innovation in the coming years will lead to more demand for connectivity – so all types of businesses need to consider future-proofing their connections, whether that is in one building or across a portfolio of real estate assets. In a practical sense, this will mean liaising with one or more broadband operators at each site, and negotiating wayleaves, the legal agreement which allows operators to access buildings to install or maintain their hardware.

Even with all this progress however, the UK ranks only 35th in the world broadband

50%

of respondents in EY's latest UK Attractiveness Survey believe gigabit connectivity will drive UK growth, up from 26% citing it in 2019.

speed league, according to data from cable.co.uk. This is far behind Jersey, which ranks in second place after the country made full-fibre to the premises (FTTP) available to all residents. Macau is ranked the country with the fastest broadband.

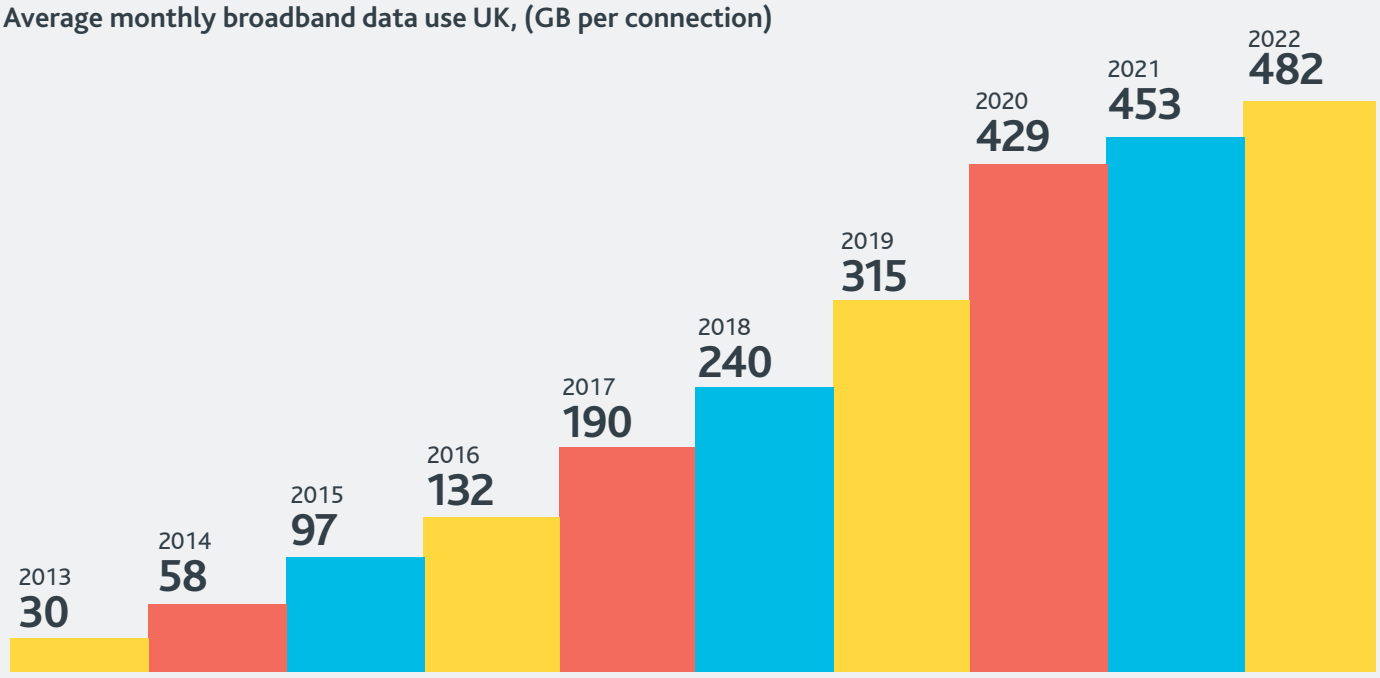
The importance of meeting targets is not just so the Government can say 'job done'. Ensuring that the country has fast and reliable broadband is going to be crucial for attracting investment, creating jobs and ultimately delivering economic growth. The UK Digital Strategy Report included calculations commissioned by the Department of Culture, Media and Sport (DCMS) showing that the Government's "approach to supporting and strengthening the digital economy could grow the UK tech sector's annual gross value added (GVA) by an additional £41.5 billion by 2025, and create a further 678,000 jobs."

Likewise, a recent report from the NIC points to analysis which shows that Artificial Intelligence could add 10% to the UK economy by 2030.

"States with higher speeds of broadband have a higher economic effect...Not only is there penetration as a driver, but there's also... return to speed. At faster speeds, the economy tends to be more efficient."

Dr. Raul Katz , president at Telecom Advisory Services LLC, and director of business strategy research, Columbia University, referring to research in the US

Average monthly broadband data use UK, (GB per connection)

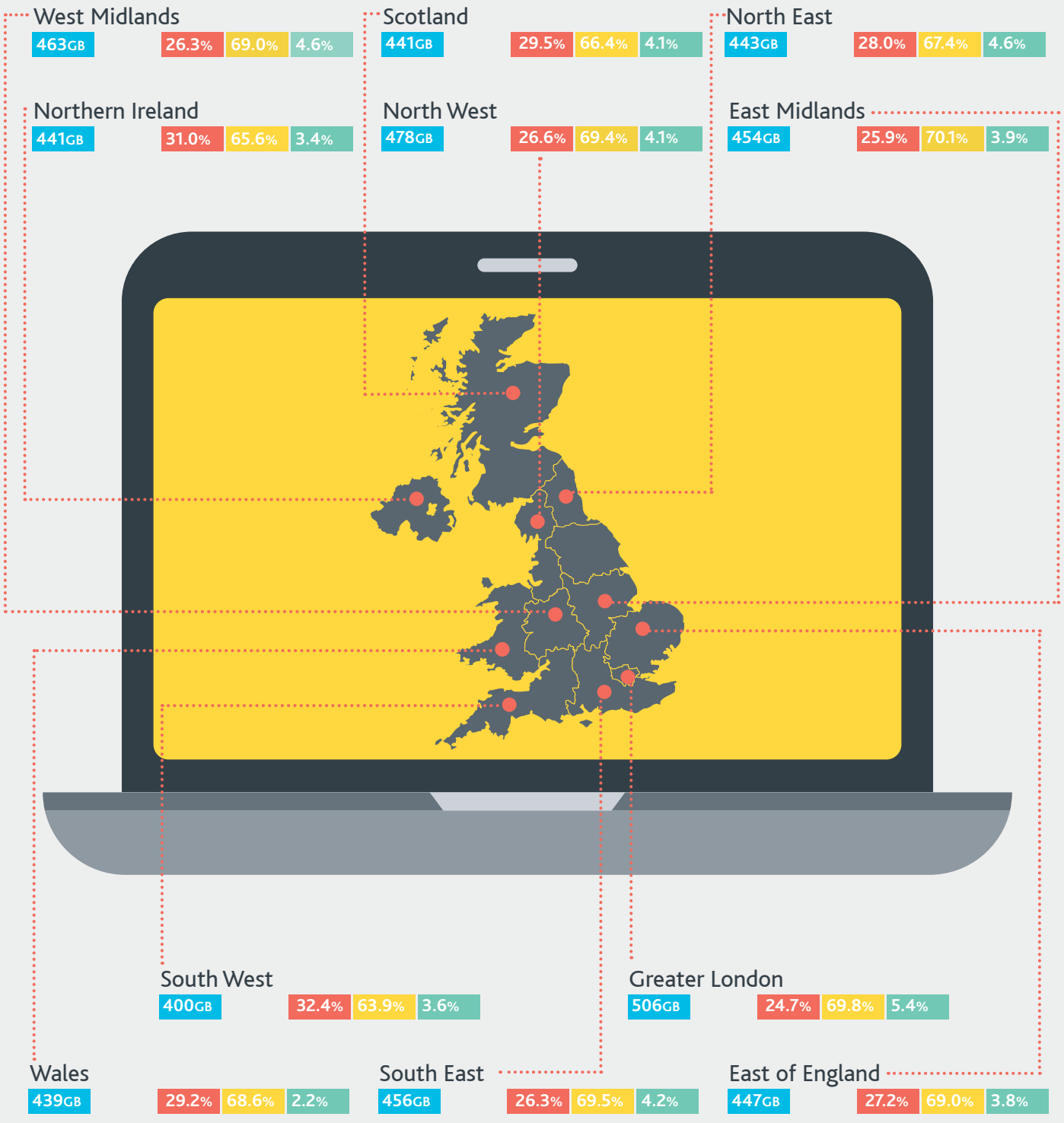


Source: Ofcom

The connectivity map

Average broadband use, and speed of connections

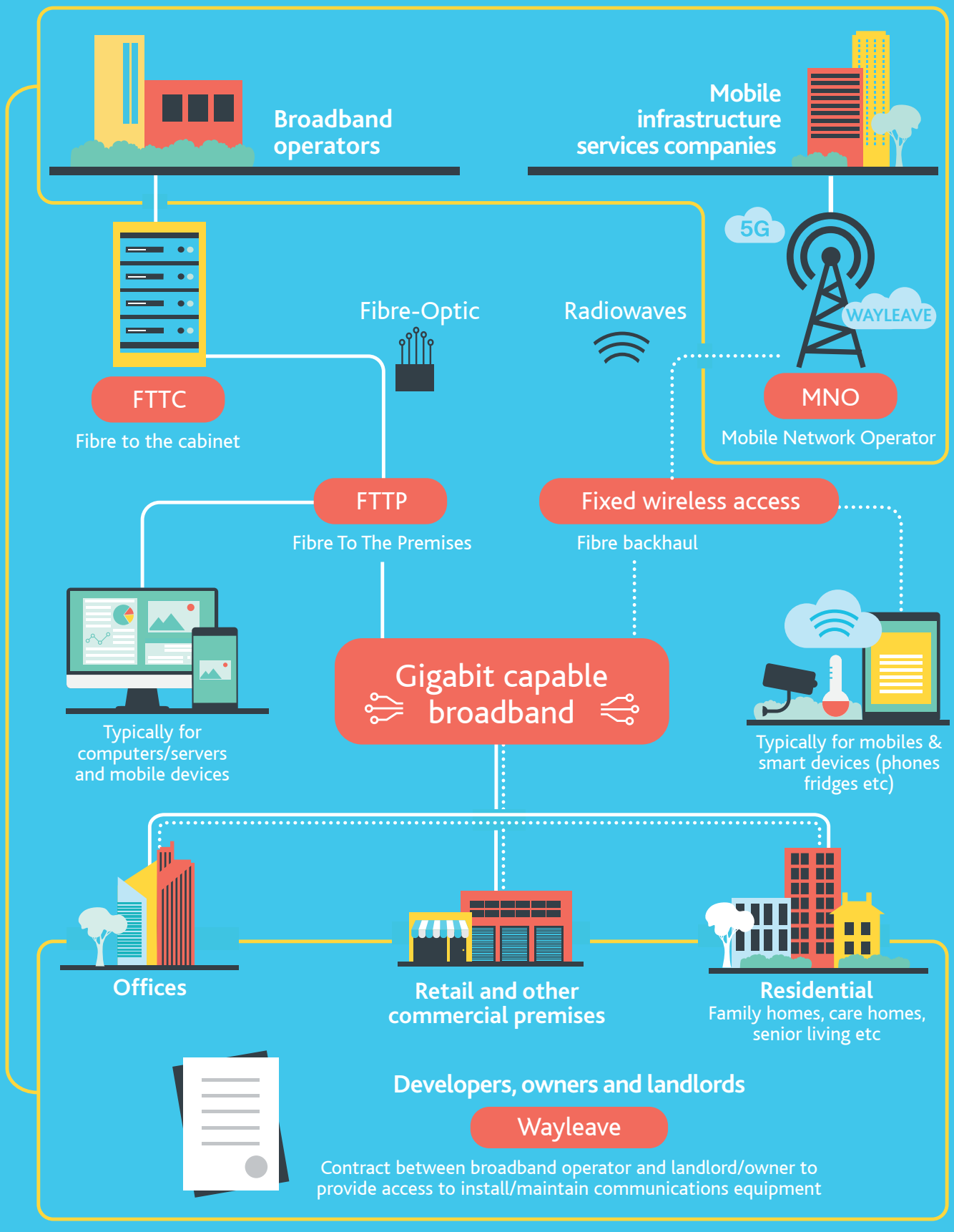
Average monthly usage per household (GB)
Standard connections %
Superfast connections %
Ultrafast connections %



Source: Broadbandproviders.co.uk

Decoding broadband and 5G

How it works and what it means

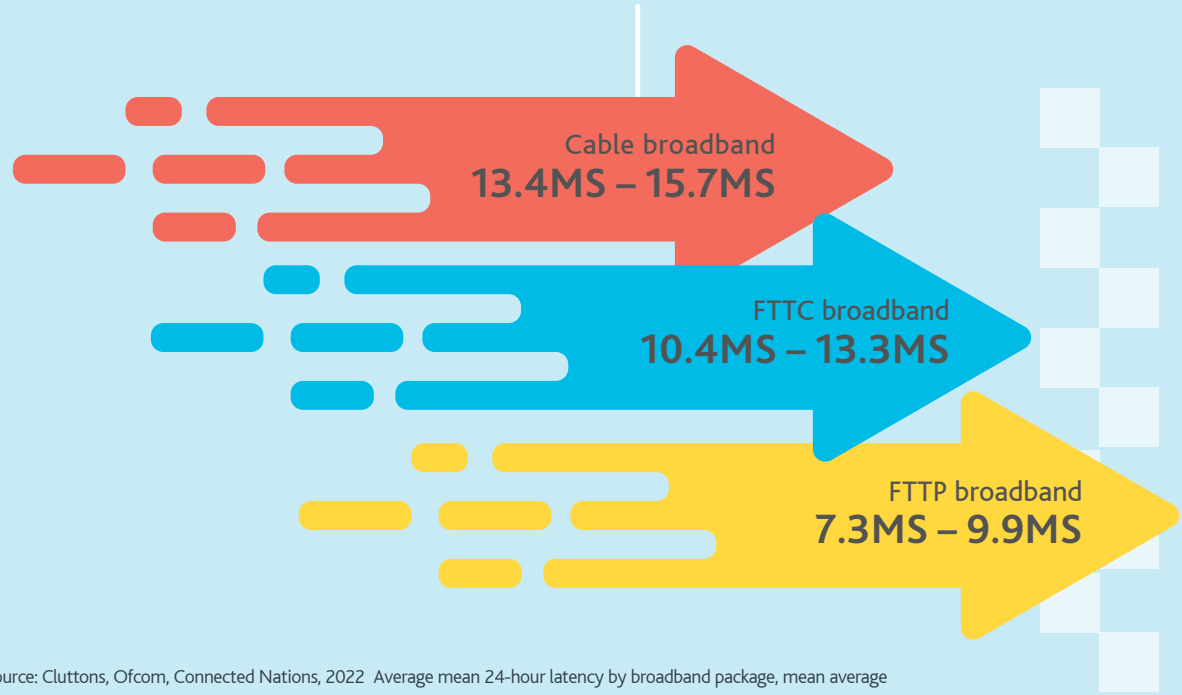


Source: Cluttons

How latency compares

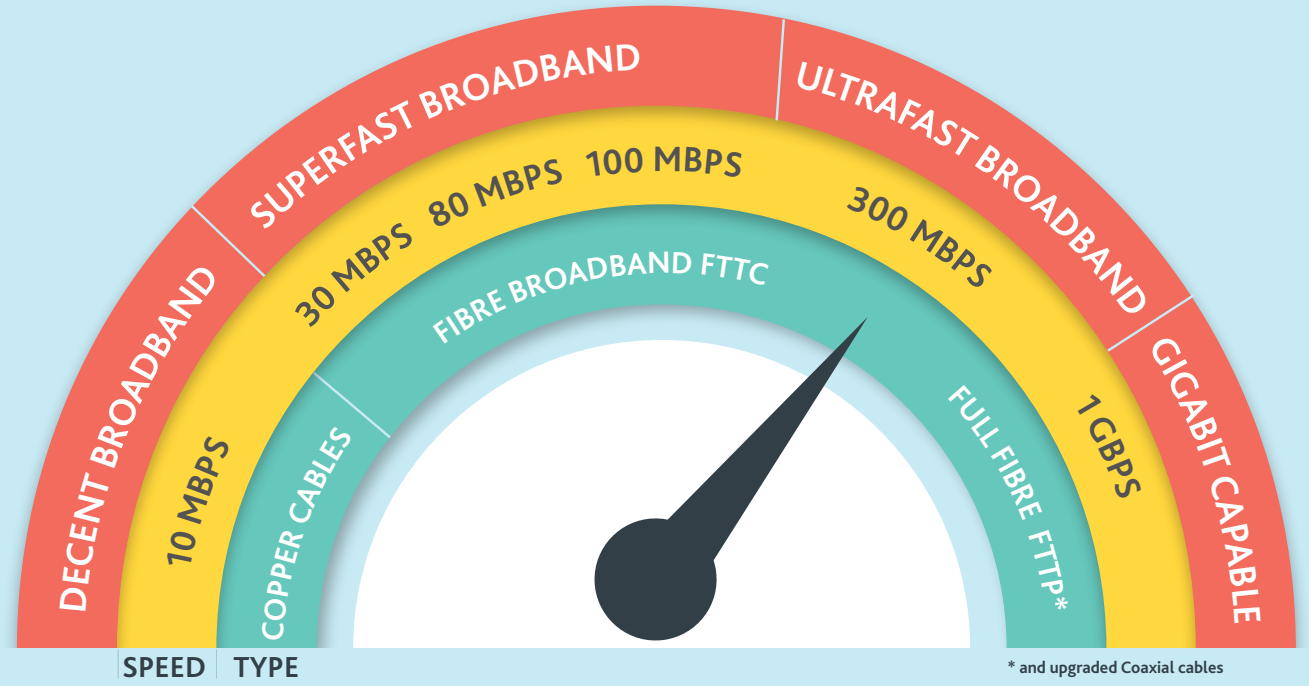
Latency (Ping time)

Time taken to send information and receive a response (mean averages, Ofcom 2022).
The shorter the time, the faster the connection.



Source: Cluttons, Ofcom, Connected Nations, 2022 Average mean 24-hour latency by broadband package, mean average

Pushing the pace: broadband speeds



Source: Cluttons

Focus on: 5G

As its name signals, 5G is the fifth generation mobile network. The difference between 5G and its predecessors comes down to speed. While some 3G offers average data download speeds of 3-8 Mbps, 4G LTE offers 15-20 Mbps, 5G offers average download speeds of between 150-200 Mbps, with peak speeds up to 10 Gbps. As examined with broadband, the sheer download speeds on offer increase capacity, as everything moves more quickly.

The Government has set a target that the there should be nationwide 5G coverage by 2030, and while there has been a significant uplift in its use, there is still a long way to go to meet this objective.

The latest Ofcom report said that 9% of data traffic was carried over 5G in 2022, up from 3% in 2021, and that 20% of mobile phone handsets are now 5G capable.

In terms of coverage, 5G is available from at least one mobile network operator (MNO) outside 67% – 77% of premises, up from 42% -57% in 2021.

However, the verdict on the progress in this area is less positive than broadband. Earlier this year the National Infrastructure Commission (NIC) said the Government needed to set out a "clear vision" for 5G mobile networks. The Strategy, published in April, was clear about the benefits of 5G, highlighting that the widespread adoption of 5G could result in £159 billion in productivity benefits by 2035.

Yet there are still large hurdles to be overcome before this rollout will succeed. Key among these is securing sites for masts and flexibility to renew equipment to ensure good coverage.

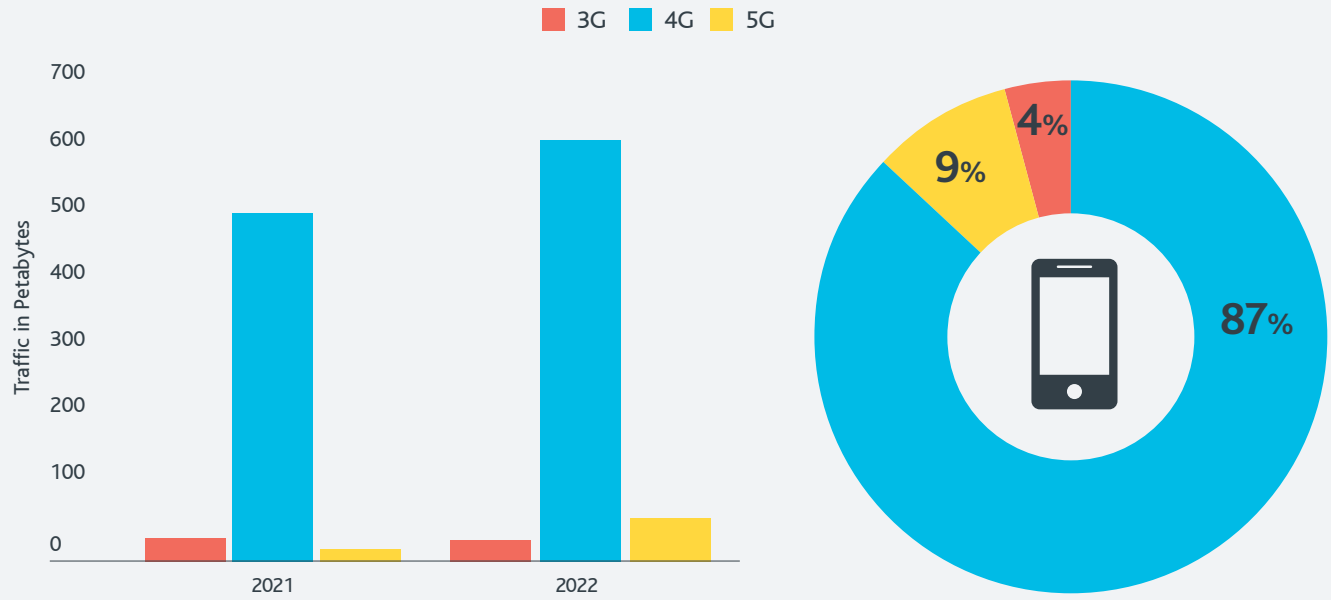
Where land is owned by local authorities, there is a push from central Government to encourage them to use their assets to provide sites – with the creation of the Digital Connectivity Infrastructure Accelerator programme.

85m

Number of mobile phones in UK, 98% of population have a mobile phone.

Source: Mobileuk.org

UK mobiles: Total monthly traffic by technology (2021-2022) and percentage share (2022)



Source: Cluttons, Ofcom Connected Nations 2022 - Ofcom analysis of mobile operator data

"There are always two factors to consider when operators and landlords or landowners negotiate over sites for mobile networks. The individual deal, which will be unique in every case, but also the overarching need for connectivity, not just in that location, but in the wider vicinity. Smoothing the process would benefit both parties and would ultimately mean more coverage and better connectivity for all."

Sarah Gibbs, associate, telecoms, Cluttons

Connectivity UK: Key dates

- **2017 –** Government announces target of 10 million premises connected to full-fibre by 2027
- **2017 –** Telecoms industry announces landlines to be retired by 2025
- **2017 –** Electronic Communications Code (ECC) comes into force (allowing mobile firms to exercise rights over land in line with criteria and agreements)
- **2018 –** Government announces target of full-fibre nationwide by 2033 and 15 million premises connected by 2025
- **2018 –** Government announces majority of population to have access to 5G signal by 2027
- **2019 –** Government announces target for full-fibre nationwide by 2025
- **2021 –** Consultation on changes to ECC (specifically access to land)
- **2020 –** Government announces target of at least 85% of UK having gigabit broadband by 2025
- **2022 –** Government announces target of gigabit broadband nationwide by 2030
- **2022 –** Changes to ECC introduced under the Product Security and Telecoms Infrastructure Act
- **2022 –** Government announces target of nationwide 4G coverage and majority of population has access to 5G signal by 2030
- **2023 –** Government announces target of nationwide 5G coverage by 2030
- **2023 –** 3G switchoff starts
- **2025 –** UK landlines switched off
- **2030 –** Majority of population have access to basic 5G under current targets
- **2030 –** Nationwide access to full-fibre broadband under current targets
- **2033 –** All 2G and 3G switched off

"Operators' inability to secure suitable sites for electronic communications equipment is one of the biggest barriers to network deployment."

UK Wireless Infrastructure Strategy, Department for Science, Innovation & Technology, April 2023

An example of this sort of joined-up thinking has been seen in the West Midlands, which under a trial programme created West Midlands 5G (WM5G), simplifying processes and accelerating 5G deployment in the region by more than six months. It is now the region with the best 5G coverage in the country.

While we tend to think of 5G as being for mobile phones, or smart technologies in homes and offices, there are many other ways this high level of connectivity and the internet of things (IoT) can be used in the private and public realm to deliver better outcomes. Some recent pilots include smart traffic signal controls, pain distraction VR headsets for palliative care in the health sector and automated vehicles, again underlining the benefits of a collaborative approach between mobile operators, local and regional authorities and land and asset owners. (We examine Smart Cities in more detail on page 18).

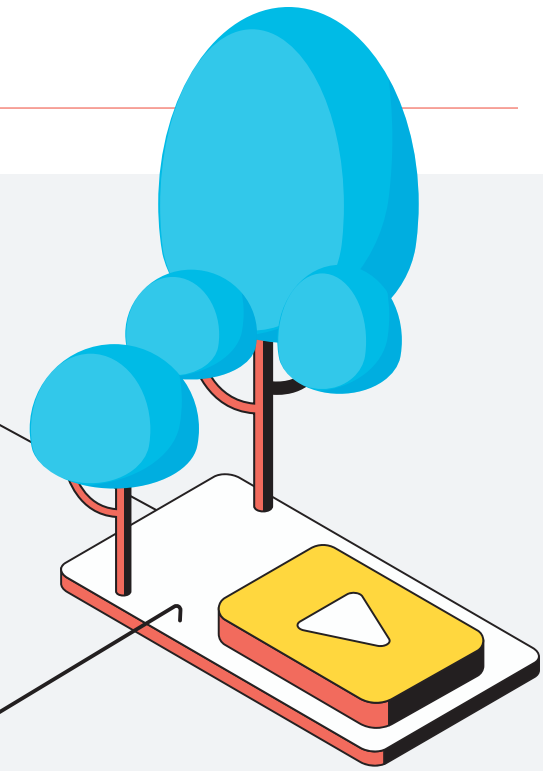
Where land or built assets which could be locations for sites are owned by individuals or companies the balance between interests is more finely balanced. This is firmly recognised in the Government's Wireless Infrastructure Strategy, which said "Operators' inability to secure suitable sites for electronic communications equipment is one of the biggest barriers to network deployment."

After a change to the rules under the Digital Economy Act in 2017, the process for securing sites become more challenging, with a number of decisions being referred to tribunal. A recent update to the law has now put much more emphasis on alternative dispute resolution between mobile operators and landowners or landlords before cases accelerate to court. As Darren Zitren, head of infrastructure at Cluttons, highlights below, there is room now for a more collaborative landscape.

78%

Proportion of SMEs who said in October 2022 that they were looking to acquire and/or upgrade at least one of their internet, landline or mobile phone services over the next 12 months, and 49% of medium SMEs saying they are considering 5G.

Source: Ofcom, 2022



Darren Zitren, head of infrastructure, shares his views on the opportunities for 5G rollout

What's been holding back progress in rolling out 5G?

The introduction of the Electronic Communications Code in 2017 resulted in much discussion around the consideration for mobile mast sites. As a result, the courts were asked to make decisions in a number of cases. The new laws introduced last year signalling that alternative dispute resolution, eg mediation, should be a first step is helping to create an environment where disputes are less frequent.

With our experience in the rural and urban land and property sectors, we understand that each case is unique, and needs to be assessed on its own merits. When we take a step back however, slowing down the progress on roll-out and upgrades to the mobile network means the country may not meet its own targets. These targets are set because policymakers recognise the importance of connectivity to keep the UK economically competitive.

What will happen if 5G roll-out falls behind?

The country is already reliant on 5G technology – from conference calling on the move, to smart devices to transport infrastructure to paying for your groceries by card or phone. This demand is only going to increase, but we will start to feel the impact on our lives if the roll-out falls behind.

What are the opportunities?

When all parties come together they will create the coverage the UK needs. In addition to annual income, mobile infrastructure will essentially be bringing communities together. One successful agreement could mean hundreds of homes in a rural community have connectivity.

"Net Zero doesn't work without connectivity"

In 2019, the UK was one of the first countries to pledge to reduce emissions to 'net zero' by 2050. Greenhouse gas emissions have halved since 1990, but there is still further to go to meet this target. There is increasing focus among businesses and property owners and investors on delivering strategies to ensure their company or property will meet this net zero target – especially as heating for homes and workplaces is responsible for around a third of the UK's carbon emissions.

These considerations lie behind much of the work on the 'E' of ESG, which stands for Environmental, Social and Governance – factors which contribute to a company's approach to sustainability.

These changes are being underpinned by legislation, most notably in the UK, MEES (Minimum Energy Efficiency Standards) Regulations. Under these rules, all commercial and domestic properties will have to attain ever higher EPC ratings – these ratings are measures of energy efficiency. From April 2023 it became illegal to let out a commercial building with the lowest EPC ratings of F and G. For homes being let out to tenants, this rule was introduced back in 2018.

Under proposed legislation the next steps will come in 2025 – when the minimum ratings for new lets being agreed for homes will rise to C. In 2028 all residential rental properties will have to have a C rating or above. There is some discussion that the 2025 rule will be extended to 2028, but this still means that many domestic landlords need to start planning how to upgrade their property in the coming years. It is estimated that 79% of residential rental landlords have at least one rental property rated under C, according to data from Shawbrook.

For commercial property, there are proposals that would mean all properties must have an EPC rating of C or higher by 1 April 2027, and B or better by 2030.

76%

MPs who believe gigabit-capable connections are important to reach Net Zero

Survey 2021, Cluttons

As well as legislation, there is increased value and currency for commercial buildings which meet the 'green' standards of some other ratings systems, including BREEAM, which sets standards for the environmental performance of buildings through the design, specification, construction and operation – predominantly used in the UK. And for investors, the GRESB rating – a leading ESG benchmark for real estate and infrastructure is used by 120 institutional investors with more than US$5 trillion in assets globally. GRESB recognises WiredScore certification, which measures digital connectivity in buildings (explained in detail on page 17) indicating a welcome recognition among investors that have the right digital infrastructure in place plays a part in ESG, and future-proofing.

Niall O'Shea, a leading ESG advisor, expands on this in his column. He explains the tech needed for monitoring and analysing ESG need high levels of connectivity.

"With the built environment driving close to 40% of global carbon emissions, green real estate is an unequivocal way to abate the climate crisis – and a key priority for future investments."

World Economic Forum

Policymakers also recognise the role connectivity plays in ESG. In our survey of MPs conducted in 2021, 76% of those surveyed said that gigabit connections were important to reach net zero targets.

John Gravett, managing director at Cluttons, sums this up in his comments on page 19. He says: "Net zero doesn't work without connectivity."

As time goes on, considering the level of connectivity, to support business needs as well as ESG, needs to become a more prominent discussion, especially among asset managers, property managers and lenders.

Niall O'Shea, managing director, Discern Sustainability

"Just a decade ago the idea that connectivity should be considered an essential infrastructure on a par with roads and bridges seemed like a first-world indulgence. Today, we simply expect connectivity to be available, and working – just like other infrastructure.

As consultants we advise clients on (among other things); net zero buildings; carbon credit tokenisation; biodiversity protection; the sharing economy; resilient infrastructure and proof of sustainable origin. It is sobering to let sink in how not one of these things can happen without coordinated investment in connectivity throughout the built environment, across the public and private spheres.

Real estate investors will need, for example, digital twins or models of how their buildings are performing on energy, water and waste. These rely on hardware as well as software to monitor their buildings' performance in real-time and make adjustments on the fly. Digital twins rely on swathes of data, high-quality connectivity and Internet of Things (IoT) devices. The kit and computing power are not sovereign inside the assets. They depend on support, conformity and reliability from all the connectivity infrastructure 'on the outside'.

In this regard, it is telling that the term 'smart grids' is ceding to just 'grids' in the way 'smartphone' has to good old 'phone'. The assumption of abundant, dynamic and high-performing connectivity to meet their ESG objectives and increasingly, legal obligations, is latent, rather than explicit among our clients. Yet, as parts of this report show, this cannot be taken for granted. Investment in connectivity in the widest sense: including grids, electrification infrastructure and IoT lags the scale of the collective need.

Investors in the built environment and underwriters of credit can only do so much. At a minimum, they can at least ensure that the underlying assets can be upgraded economically to cope with the connectivity demands that will be placed on them by tenants, regulations and market forces. That requires a much more granular understanding of what they are buying, and a more forward-looking approach to estate management."

From service to utility

Connectivity is rising sharply up the agenda for both residential and commercial landlords, but there is further to go. We spoke to Ian Scott, head of property management at Cadogan. The Cadogan estate has already started upgrading their connectivity – and as Ian highlights, a high level of connectivity is now a necessity for residential and commercial customers.

We also interviewed Jules Barker, global director of product at WiredScore, who highlights the importance of asset managers and property managers considering connectivity as they future-proof their buildings. He points to research demonstrating the financial premiums achieved for well-connected buildings. WiredScore certification is recognised by GRESB, the standard for portfolio-level ESG reporting (as explained earlier on pages 14 and 15).

Case Study: Cadogan

Ian Scott, head of property management at Cadogan

"We are upgrading our connectivity to enable gigabit broadband in a process which will roll out across our whole estate – some 2,000 homes, 350 retail units and 500,000 sqft of office space across 93 acres of Chelsea and Knightsbridge in central London.

We are keen that our residential and commercial customers receive the best possible service, including connection options and the fastest fibre-optic connections to their property. All modern occupiers want high levels of connectivity, but we have to balance that against ensuring our buildings are protected, many of which are of historic significance. Cluttons understand both property and digital infrastructure and therefore played a key role in facilitating the discussions with our fibre provider.

The upgrade will ensure that our residents and occupiers will have the advantage of guaranteed high-speed connections. **In this changing landscape, Gigabit connectivity is now more of a utility than a service. It is a necessity."**

Courtesy of Cadogan

30%

Of medium SMEs who said they were prevented from moving location because of lack of connectivity

Source: Ofcom

Jules Barker, global director of product, WiredScore

What do you mean by connectivity?

WiredScore certification recognizes and promotes best-in-class digitally connected buildings. This focuses on the quality and resilience of the digital connectivity in the building, and includes assessing criteria such as mobile and Wi-Fi connectivity, telecommunications, risers and more.

Why do we need more transparency around digital connectivity?

Despite general perceptions, as we move through the third decade of the 21st century good connectivity is not ubiquitous.

By creating a globally-recognised framework against which to measure and improve the digital credentials of a building, WiredScore's mission is to make the world's buildings smarter and better connected.

And all of this feeds in ultimately to narrowing the digital divide.

How do you score buildings?

We look at the readiness of a building in terms of a tenant being able to move in and pick up straight away – so the quality of the infrastructure, and the connectivity.

Gold and Platinum buildings generally have on average more than 5 fibre providers available for occupiers to choose from as well as multiple mobile providers offering 5G. We have found that it is very common in WiredScore Gold and Platinum buildings for high quality mobile performance to be available across multiple providers.

You've mentioned the process of helping building owners improve existing buildings, what about new developments?

Yes, our certifications also help building owners achieve great outcomes in their developments. We will begin the certification process based on plans, and we will suggest ways that they can improve the building's connectivity and therefore their score.

Sometimes an overlooked aspect of digital connectivity, especially for offices and other businesses, is what happens when things go wrong?

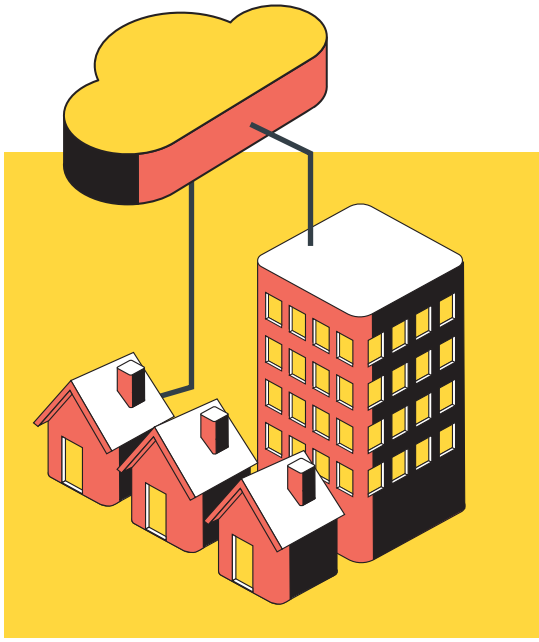
We have a very strong view that ESG is actually missing a fourth letter. That letter is R for Resilience.

Our certifications include several elements that will reduce the probability of things going wrong, and maintain continuity if they do so, i.e. ensuring resilience. We help our clients think through the wider aspects of what resilience is. Are you putting in technology that will stand the test of time? Are you putting in technology and installing it in a way that the building is resilient to changes in requirements? For example – a tenant may want to add in a series of small meeting rooms on a particular floor in three years' time. Will your infrastructure allow separate control of lighting and temperatures in these new spaces? We would highly encourage landlords to be to be designing the technology in such a way that it can be digitally reprogrammed for a myriad of future changes.

For example, we will look, as part of ESG+R, at whether a building has two points of entry for the cabling, so that if something happens to one, internet access isn't cut off. There needs to be diversity between the risers, where cabling goes up the building. Another key factor is flood prevention in the server room.

The more smart technology you put in a building, the greater the importance of having really excellent, thoughtful, connectivity.

And the layer I would put on top of that is then the ESG+R layer. You can only really deliver great ESG+R outcomes in a building if you have the technology in place to understand the situation, gather and process the resulting data, and use the data to effect change. And you can only put the technology



in the building successfully if you have a good base layer of connectivity.

Having a top rating for connectivity is a clear differentiator for landlords, but there is clear data that backs this up in terms of financials. Can you tell us a little more about that?

Analysts at Moody's analysed office buildings in the US, finding that lease lengths were an average of nine months longer for well-connected buildings - confirmed by a WiredScore certification. They also revealed a 2.2% rental growth premium between 2020 and 2022 for certified buildings, as well as lower vacancy rates.

A similar exercise in the London market in 2019 showed that commercial buildings that had a WiredScore certificate commanded 4.7% more in rent than those without. In Midtown and the City Fringe, this rental premium rose to more than 9%.

Whether it's residential or commercial property, in the UK or other countries, the conversations we are having now with developers, landlords and owners are really about helping them figure out how to prevent obsolescence in their tech infrastructure, to prevent them from having to regularly retrofit or upgrade, because this is fundamental to long-term successful outcomes for their tenants.

Smart Cities

'Smart' (or 'connected', or 'future') cities crop up in plenty of conversations about place and planning these days. But these terms can sometimes be used in a variety of ways. The simple definition of a smart city is one which uses technology, for example connected devices (sometimes referred to as the Internet of Things, or IoT) such as sensors, to collect and analyse data to improve services.

An example of this is using road usage data to better manage traffic – a 'smart' traffic management system. Likewise in a smart city there will be smart buildings – smart technology would allow the use of up to date data on the building usage to better control energy use for example. A smart home, for example, might feed information on energy use back to the grid so this could be used to better manage energy supply, minimising the surges and troughs in energy demand than puts pressure on the system in urban settings. AI will be helping power these results, and a smart city would also be likely using advanced technology such as edge computing – meaning greater capacity for analysis and faster results.

A smart city requires high levels of reliable connectivity, in public areas as well as buildings – and this is where local and regional authorities can lead the way, especially when it comes to 5G, and providing coverage in cities. Glasgow, Belfast, Birmingham, Bristol, Hull, Manchester, Milton Keynes, London and Peterborough have all implemented smart city projects. The most notable perhaps is Transport for London's Oyster card scheme, providing real-time data on journeys. But there is much further to go before a UK city can claim 'smart city' status. Data security remains a concern among many. Policymakers have recognised this, and the Mayor of London drawn up an 'emerging tech charter' for London with four principles for implementing technology: working in the open, respecting diversity, trustworthiness with data and sustainability. On the other hand, these technological advances can improve quality of life.

Corey Gray, global CEO of Smart Cities Council, which opened in the UK in 2022, said: "Smart Cities are about people and place, not just tech and data. Successful Smart Cities and communities are inevitably human-centric, data-driven and sometimes technology-enabled, for the benefit of everyone."

2nd

London ranked 2nd in European and US cities scored by tech and connectivity infrastructure for a smart city future

Source: ProptechOS

John Gravett, managing director
Cluttons

The final word

"High quality connectivity is no longer a nice to have service. It is a utility."

How long have you been focussing on connectivity at Cluttons?

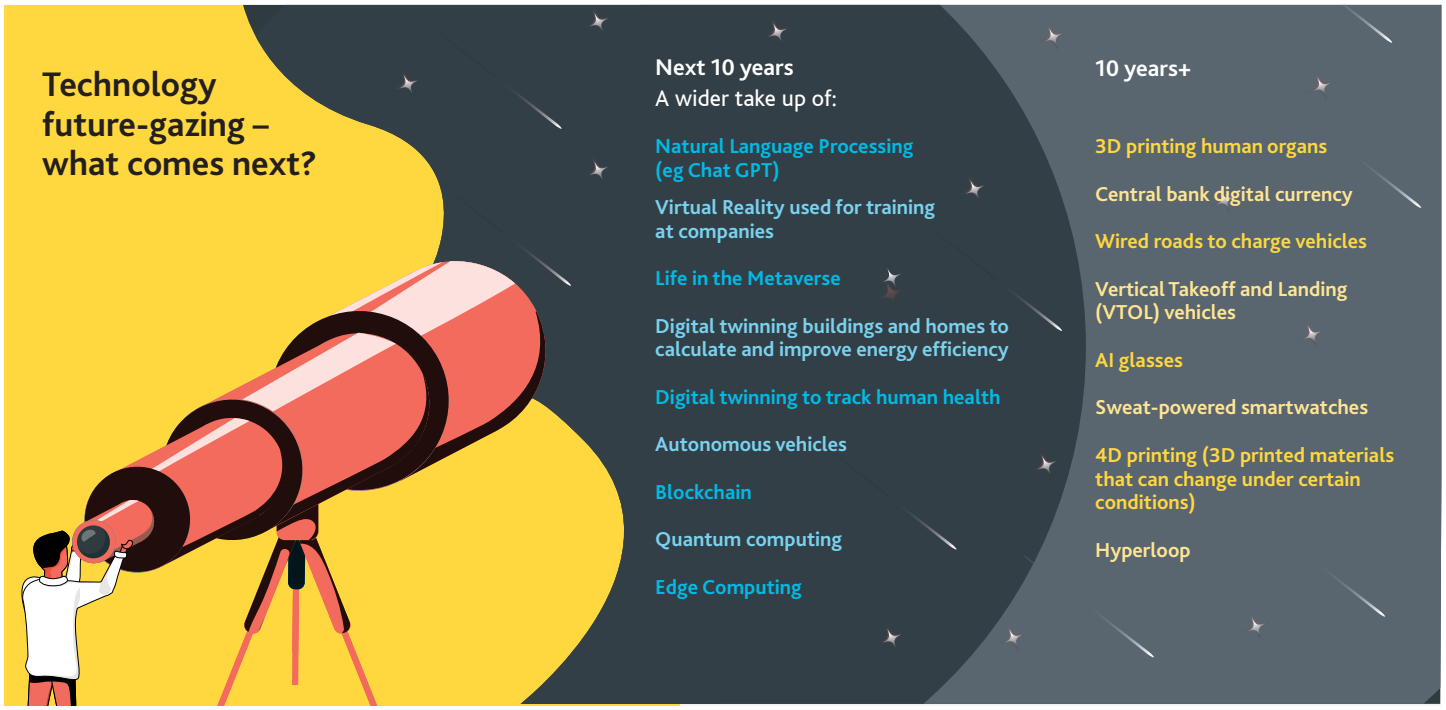
"I started in the digital infrastructure sector in 1998. At that point, we were supporting telecoms companies and businesses upgrading from 2 ½ G, supporting roll-outs. To see 5G and full-fibre rollout and discussions around digital Britain, it does make you look back and be glad you've been on the journey."

What has been the biggest change since then?

"Digital connectivity is now starting to be considered as infrastructure just like roads, rail and utilities. Now it needs to grow and strengthen to ensure more resilience as demand will only continue to grow. Mobile phones really gained traction in the noughties and look where we are just 20 years later. As we show below, the leaps forward in technological innovation mean we may see trends towards even more automation, and this will all need connectivity."

What needs to change to ensure this happens?

- Net zero doesn't work without connectivity. We can't think about ESG and connectivity in silos, they are all sides of the same coin. The discussion about connectivity needs to be brought to the fore.
- We need more local digital champions. They can help people and businesses understand the benefits of better connectivity, create plans which ensure high quality connections and bring operators together to deliver it.
- There have been changes to the planning system, and more to come, but it's not yet enough. When it comes to connectivity, the planning system needs integrated and updated.
- High quality connectivity is no longer a nice to have service. It is a utility. Providers can support this message by driving more widespread education about the public benefits of connection, from ESG, to access to jobs and levelling up. It's encouraging that Ofcom has said it is looking at improving consumer information about the underlying technology used to deliver broadband services later – it will report later this year.



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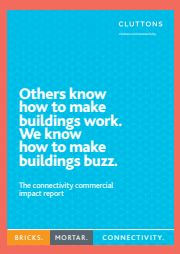
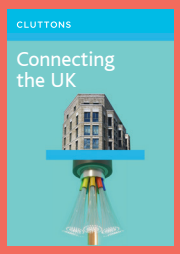
Recent research publications



Connectivity commercial impact report



Connecting the UK Report

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