

CLUTTONS

Connecting the UK

Getting the nation gigabit ready



Introduction

The digital revolution continues apace. The possibilities of billions of people connected by devices with unprecedented processing power, storage capacity, and access to knowledge are limitless. Emerging breakthroughs in fields including artificial intelligence, the Internet of Things, and quantum computing will multiply these possibilities. Each will be powered by gigabit¹ networks, which are planned to cover the majority of UK premises by 2025 and become ubiquitous thereafter.

Our role is to get Britain ready—acting as a go-to interface for those rolling out these networks nationwide; deploying, managing, and optimising the physical infrastructure that makes faster, more reliable mobile and fixed line connections possible. To understand the scale of the challenge, we worked with YouGov to survey thousands of stakeholders in Britain's digital future: policy makers, local authorities, businesses, and citizens.

Some of the findings are disappointing. Members of Parliament have a demonstrable lack of confidence in the pace of rollout compared to other advanced economies, and only a third are confident the UK can meet its coverage targets. The majority of local authorities say they lack the funding they need to champion connectivity in their local communities, and just 25% of citizens believe gigabit connections provide enough benefit to warrant them upgrading.

But there are also positive signs. Over 90% of policy makers acknowledge faster, more reliable connections are vital for upskilling the population, creating jobs, and increasing innovation—and the majority of councillors agree nationwide gigabit broadband and 5G are vital to levelling up the UK. Each of these findings indicate a proclivity to speed up rollout and a good understanding of the crucial role digital connectivity will play in the nation's future.

Herein we share our headline survey results and lend our support to those on a mission to make the UK a world leader in digital connectivity.

Who did we speak to?

577
Councillors

Councillors understand the digital connectivity needs of local residents and businesses and play a crucial role in delivering faster, more reliable digital connections

103
MPs

MPs can directly affect policy, supporting the rollout of gigabit networks and enabling the technological, economic and social advancement they will bring

101
IT decision makers

IT decision makers from sectors including finance, manufacturing, IT & telecoms and retail have responsibility for broadening the digital capabilities of UK businesses

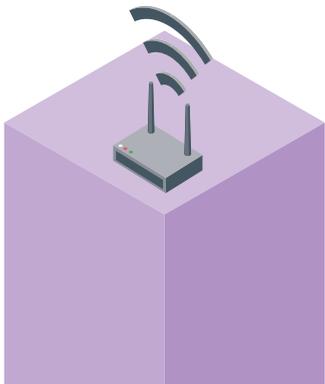
1,996
Citizens

UK citizens are the end point of the digital lifecycle, consuming digital products and using gigabit connections in their every day lives

Contents

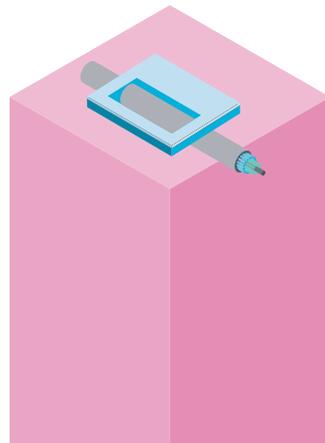
01 Progress

The importance of fast, reliable mobile and broadband connections is indubitable. They positively affect productivity, profitability and efficiency, and citizens rely on them to maintain many aspects of their daily lives.



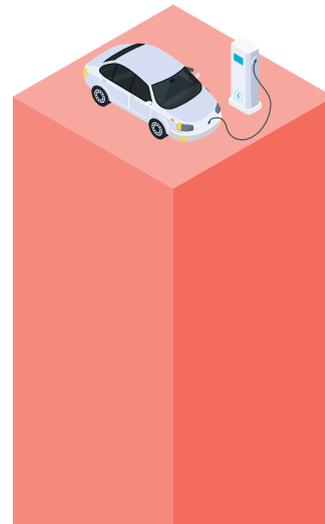
02 The left behind

Compared to other advanced economies just 38% of UK policy makers consider the nation's rollout of gigabit capable networks successful. Only a minority believe the UK will meet its gigabit targets.



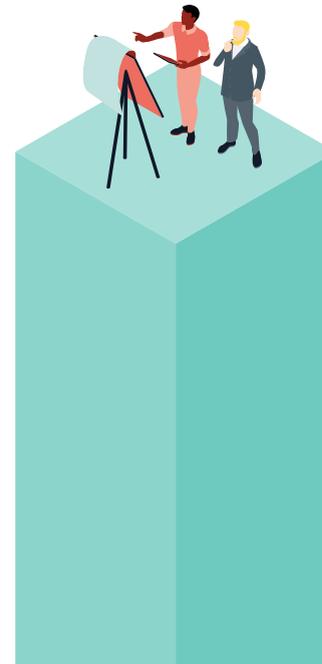
03 Digital future

Faster, more reliable connections will help the UK bounce back from the impacts of the pandemic and succeed outside the EU. They will supercharge productivity, cement flexible working, tackle climate warming and level up regional growth.



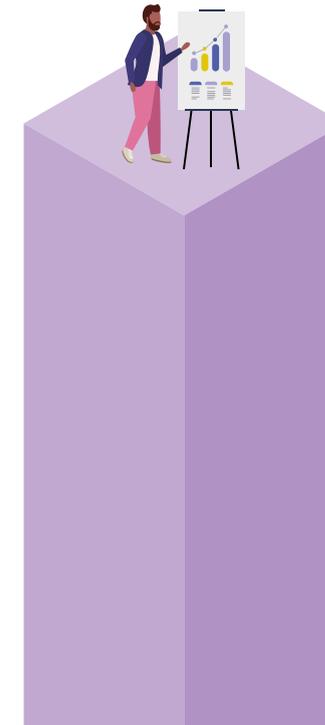
04 Stumbling blocks

Citizens are broadly supportive of communications infrastructure installation in their local area. But several policy-related barriers remain. These include access to premises and land, planning, and workforce skills.



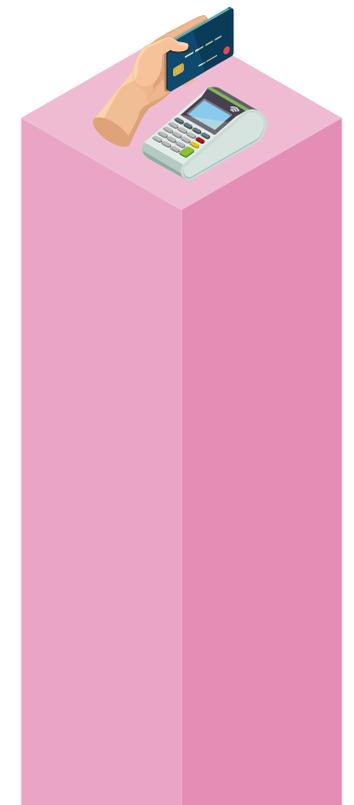
05 Local inaction

Local authorities have a significant role to play in accelerating gigabit rollout. It is therefore disappointing that under half of councillors report their local authority has a digital strategy in place.



06 Demand deficit

If the UK is to benefit from better connectivity, stimulating consumer demand is essential. Stronger uptake will provide a quicker return on investment and support the business case for building networks.



01
02
03
04
05
06

01 Progress

The importance of fast, reliable mobile and broadband connections is indubitable. They positively affect productivity, profitability and efficiency, and citizens rely on them to maintain many aspects of their daily lives.



84%

of households have a laptop or desktop computer



84%

of households have a smartphone



63%

of households have a handheld tablet or e-reader



59%

of households have a smart tv



42%

of households have a games console or handheld games player



37%

have a smart speaker that responds to voice commands



36%

of households use wearable technologies

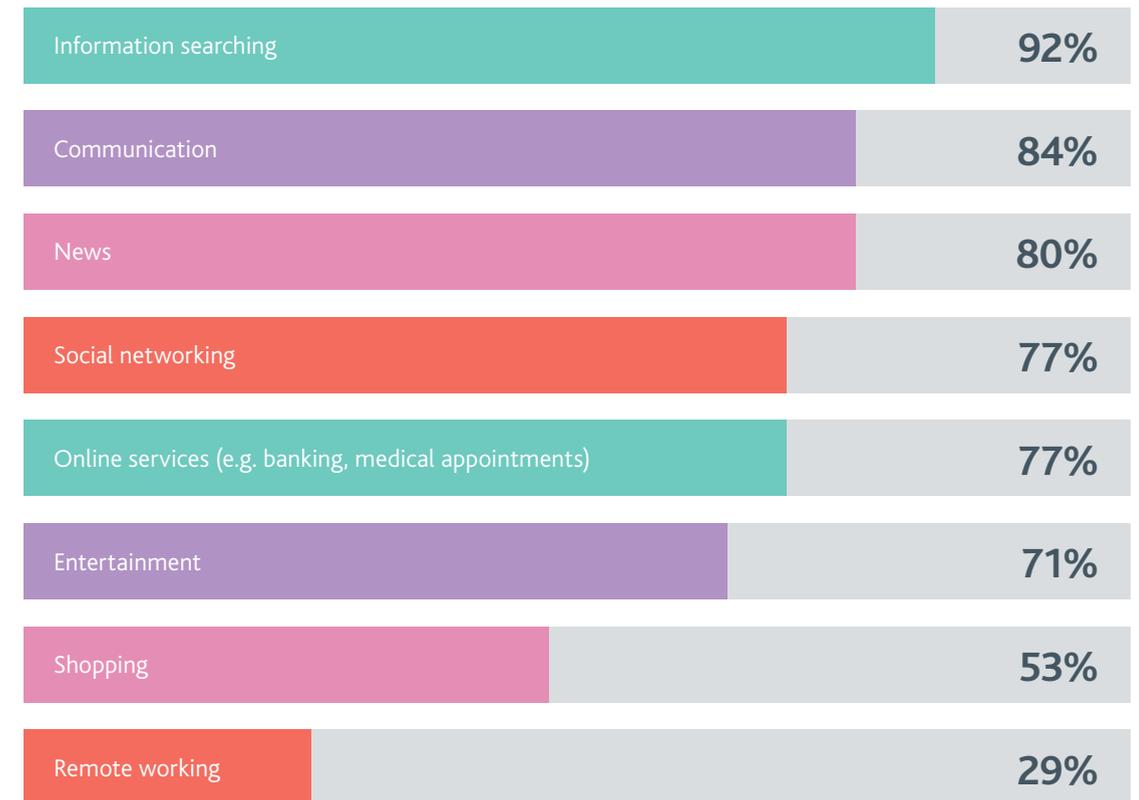


35%

of households have a streaming media player

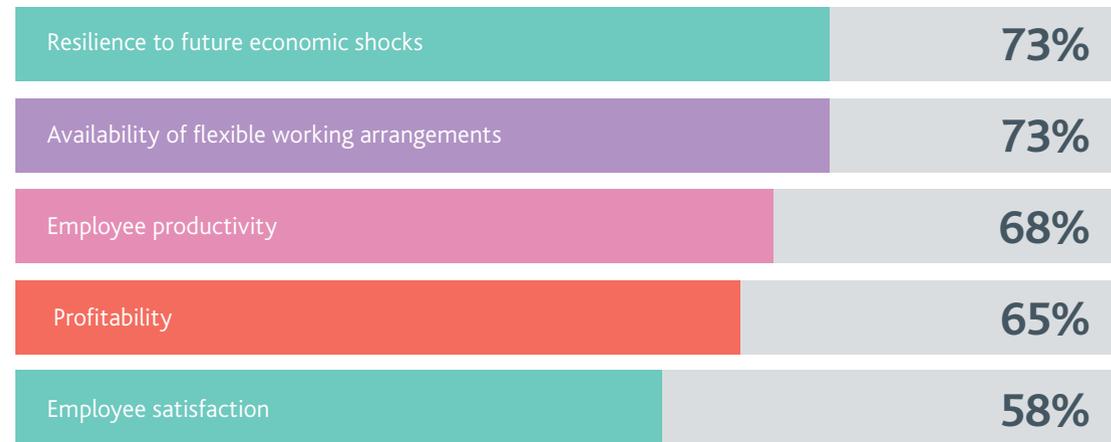
The importance of widely available, good quality connectivity has never been so evident. Millions in the UK have been confined to their homes and forced to rely on internet access to maintain many aspects of their daily existence. Most (68%) have increased their internet usage since Lockdown 1.0². Along with remote work people have made regular use of the internet for access to medical appointments and other online services, to shop online, and stay in touch with family and friends.

The UK public go online at least weekly for...



Technology is also increasingly important for millions of businesses across the UK. 95% of IT decision makers tell us digital technologies were either embedded into their organisation pre-pandemic, or that they had plans to implement them at that point. Two-thirds (63%) believe the pandemic either accelerated or prompted their adoption and most agree they have increased productivity, profitability and resilience to future economic shocks.

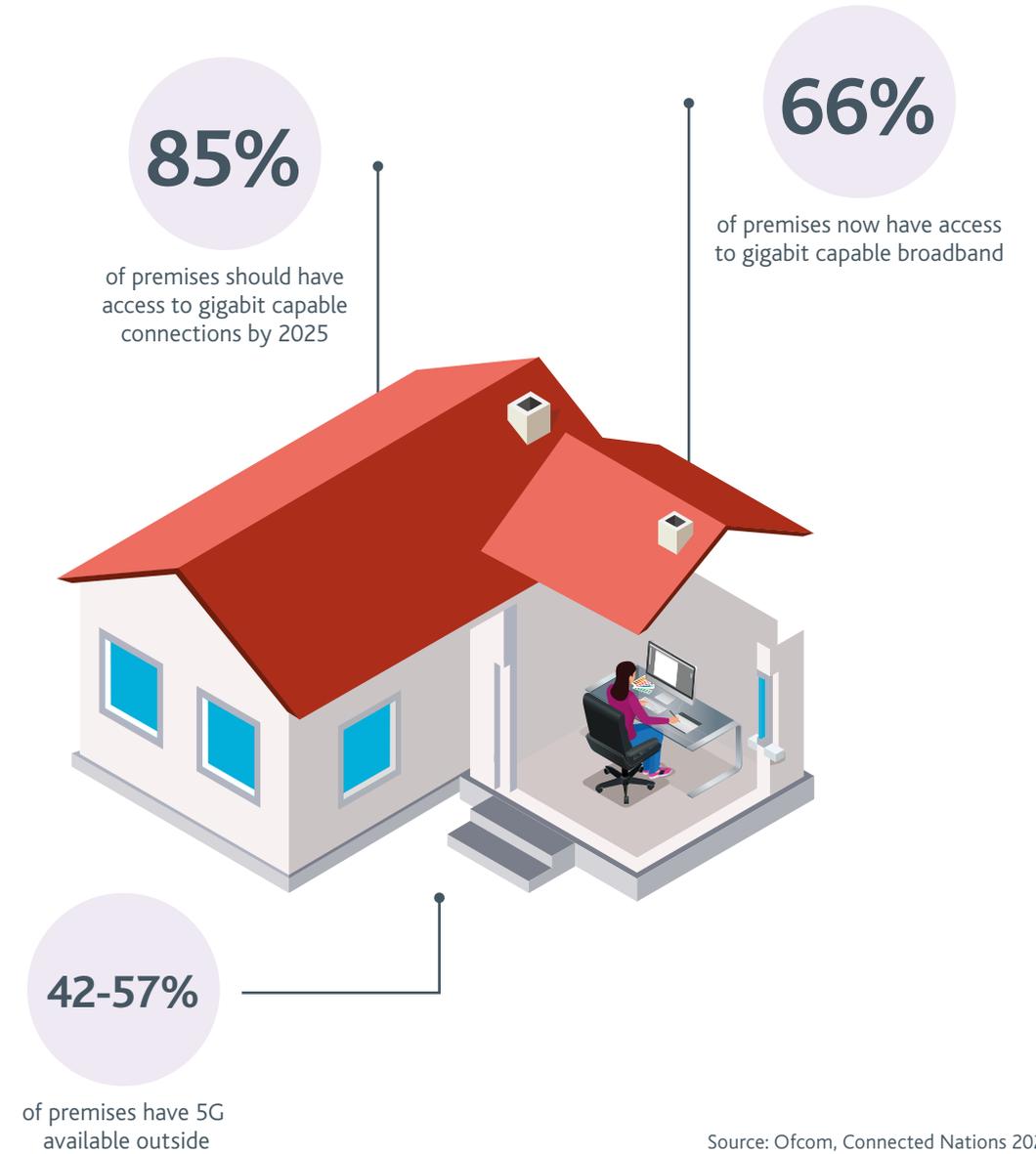
IT decision makers believe their adoption of technologies has increased...



5G mobile and gigabit broadband connections are faster, more reliable, and more future-proofed than the connections of the past. They will better support citizens and enterprises, and are expected to lead to wider social, economic, environmental, and technological progress (03 Digital future).

The UK Government has set out an ambitious strategy for the rollout of gigabit networks. It aims for at least 85% of UK premises to have access to gigabit capable broadband connections by 2025, getting close to 100% as soon as possible, and it is committed to being a world leader in 5G with the majority of the population covered by 2027.

Things are improving at a rapid pace; 66% of premises can now access gigabit broadband³ and 5G is available from at least one mobile network operator outside 42-57% of premises⁴. But it is clear from our research that action is required to enable rollout to go further, faster.



02 The left behind

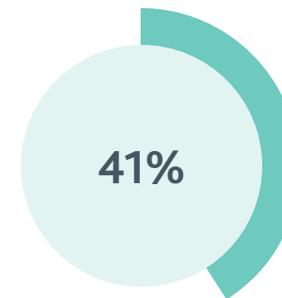
Compared to other advanced economies just 38% of UK policy makers consider the nation's rollout of gigabit capable networks successful. Only a minority believe the UK will meet its rollout targets.

When it comes to digital connectivity, the UK risks falling behind internationally. It ranks 4th in the G7 for uptake of high-speed broadband⁵ behind France, Germany, and Canada, and it is behind Japan and the US on uptake of high-speed mobile connections⁶. Compared to other advanced economies, only 38% of UK policy makers consider the country's rollout of gigabit capable networks successful.

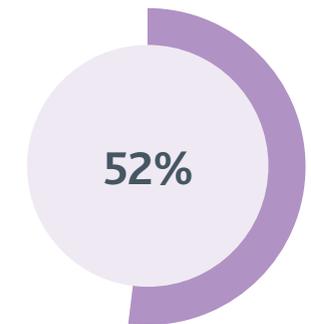
MPs views on UK progress with gigabit rollout compared to other advanced economies



Citizens also see much room for improvement to their mobile and broadband connections, with only around half agreeing their internet connections are fast and reliable enough to do what they want online whenever they choose.

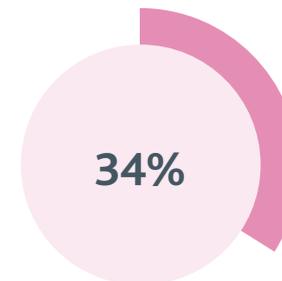


Citizens believe their mobile connection is fast and reliable enough to do what they want online



Citizens believe their home broadband connection is fast and reliable enough to do what they want online

The Government's Public Accounts Committee, responsible for reviewing the status of gigabit rollout in early 2021, have been critical. They concluded: "The Government's promises on digital connectivity are more important than ever but those promises are slipping farther and farther out of reach". Only a third of MPs we surveyed said they were confident the government would reach its gigabit rollout targets.



MPs confident they the UK will achieve its target of 85% gigabit coverage by 2025

With speed and reliability of consumers' broadband and mobile connections lacking, and confidence about their imminent improvement amongst policy makers low, there is much progress to be made.

It is essential that the government creates the right conditions for investment into 5G mobile and gigabit broadband across the country and makes available funding to improve connectivity in the hardest to reach places.

02

Connecting rural areas

Industry has historically prioritised densely populated urban areas where economies of scale are achievable and network rollout costs can be reduced. Consequently, scarcely populated rural areas have lagged behind.

"The challenge the industry faces is lack of return on investment in more remote and sparsely populated areas, where the cost and challenge of delivering connectivity is at its greatest and the numbers of customers are low".

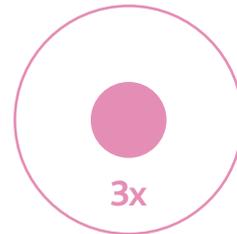
02

Under current targets 15% of the country, most likely to be rural areas and in the devolved nations, risk not receiving gigabit-capable broadband connections by 2025⁷. In fact, the National Infrastructure Strategy provides no specific target for when the last 15% will receive gigabit connectivity⁸.

With 5G focused on serving the majority of the population rather than the majority of the UK's landmass there is a risk that it will follow a similar pattern – leaving some parts of the country with poorer mobile connectivity and exacerbating the digital divide.

Our survey results indicate tangible signs that this division is being experienced by the public.

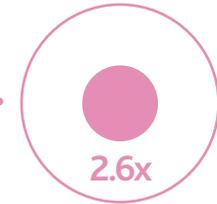
- Urbanites
- Rural dwellers



Rural dwellers are more likely to experience not spots multiple times a day when out and about



Rural dwellers are more likely to experience home broadband buffering on a daily basis



Rural dwellers are more likely to experience mobile not spots when at home



03 Digital future

World leading connectivity will help the UK bounce back from the impacts of the pandemic and succeed outside the EU. It will supercharge productivity, cement flexible working, tackle climate warming and level up regional growth.

Fast, reliable connections are essential to ensure the country's growth and economic resilience. They will help support all regions of the UK bounce back from the impacts of the pandemic and succeed outside the EU, and address longstanding gaps in productivity and equality by adding value to all parts of the country.

Most councillors across the UK believe better digital connections are vital to levelling up the UK, and an overwhelming majority of citizens believe it is essential for the country's social and economic advancement. Policy makers agree digital connectivity is important for future-skilling the population and creating and accessing jobs and a large proportion tell us it will help support transport improvements and emissions reductions.

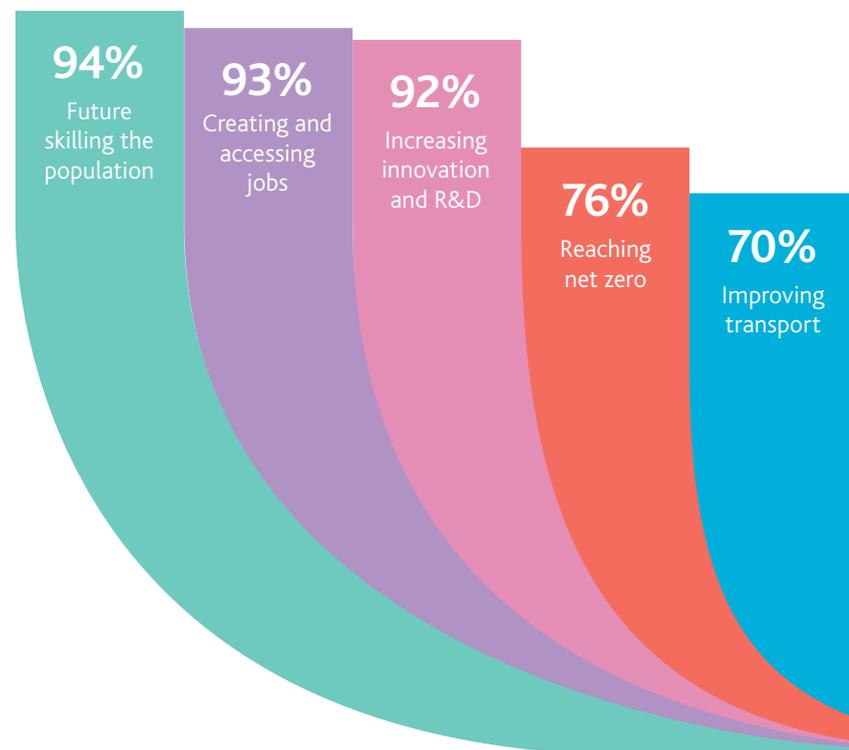


Councillors agree nationwide gigabit coverage is vital to levelling up the UK*



Citizens agree deployment of communications infrastructure is essential for social and economic advancement*

MPs believe gigabit connections are important for...



*Note: Figures exclude respondents who selected "I don't know"

02
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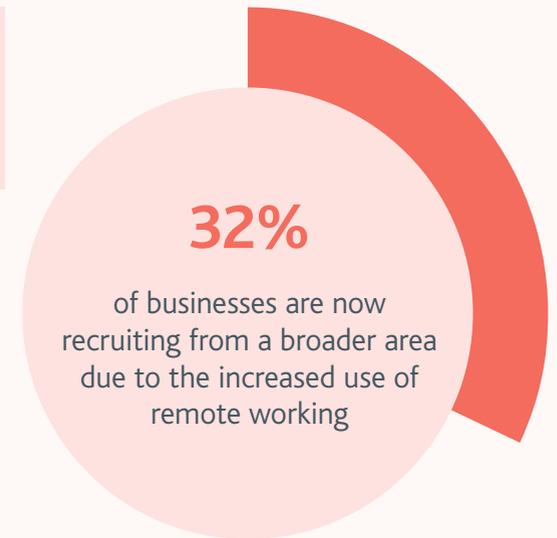
Ubiquitous gigabit connections present an opportunity to supercharge productivity and drive the UK's Covid-19 economic recovery. Better connectivity will level up regional economic growth, cement flexible working and lay the foundation for future innovation.

**DIGITAL CONNECTIVITY
CREATES ATTRACTIVE
INVESTMENT DESTINATIONS**

Companies are more likely to be attracted to localities with higher speed networks; fast reliable broadband has a positive impact on the creation of small business⁹ and research suggests firms located in postcodes with very high-speed networks have greater productivity and turnover¹⁰.

**BETTER INTERNET
COVERAGE MEANS
WIDER ACCESS TO JOBS**

Reliable and high-speed internet access is key to maintaining remote work post-pandemic. It will allow organisations to capture the dual benefits of improved staff wellbeing and productivity and to scout talent from wider geographies.



**DIGITAL CONNECTIONS
WILL HELP TACKLE CLIMATE
WARMING**

Fast, reliable connections give people greater flexibility in where they work and live, taking pressure off transport networks and urban housing and helping to cut carbon emissions. Many technologies aimed at reductions will be supported by gigabit connections—making them part of the roadmap to Net Zero.

**SMARTER CONNECTIONS
MEAN SMARTER PLACES
AND PLATFORMS**

More public infrastructure will be equipped with smart sensors. The data they collect will be fed into smart city platforms which, with the support of gigabit connections, will monitor, analyse, predict, and ultimately aid decision making for functions including law enforcement, environmental improvement, and emergency response.

**5G WILL LEAD TO
IMPROVEMENTS IN
TRANSPORT AND LOGISTICS**

5G networks will enable vehicles, infrastructure, bicycles, and pedestrians to communicate with one another. Applications including multimodal last mile delivery, accident prevention and autonomous vehicle operation will be supported,¹¹ creating better logistics capabilities and mobility experiences nationwide.

**WORLD LEADING
CONNECTIVITY WILL
FUEL ECONOMIC GROWTH**

Gigabit connections will reduce the time it takes for workers to complete tasks. It will allow organisations to operate more effectively by delivering services online and will enable innovation in new business models and products¹². Estimates concerning the economic growth that these technologies can bring vary—but most agree on at least tens of billions of pounds¹³.

04 Stumbling blocks

Citizens are broadly supportive of communications infrastructure installation in their local area, but local authorities cite 'community objections' as the number one issue preventing deployment. Several policy-related barriers risk delaying rollout, these must be removed.

77%

Councillors supportive of communications infrastructure being rolled out in their local area

78%

Councillors believe decision makers within their organisation are supportive of communications infrastructure rollout*

70%

Citizens supportive of communications infrastructure being rolled out in their local area*

*Note: Figures exclude respondents who selected "I don't know"

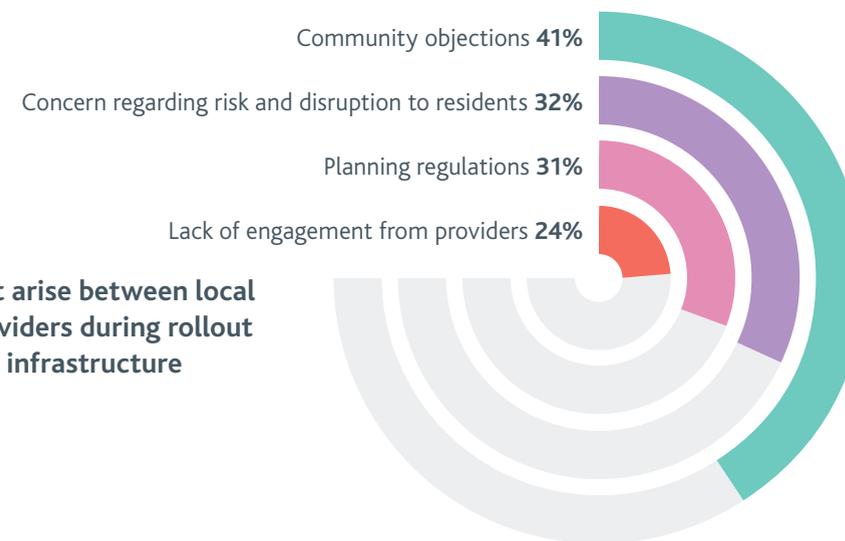
It is impossible to be entirely sure which technological advancements will emerge over the long term, but we do know that physical infrastructure will be at the root of success, offering 'plug-and-play' solutions for new technologies as they are delivered.

While local people are broadly supportive of the rollout of communications infrastructure and equipment in their area (see opposite), several policy-related barriers to the deployment risk delaying rollout. These include planning, access and workforce skills.

Planning must be future-proofed

Councillors cite planning regulations as a top three issue arising between their local authority and the communications industry when it comes to the deployment of communications infrastructure and equipment, and two thirds (63%) of MPs believe planning reform is important to speeding up gigabit rollout. Given the recognition of planning as an issue amongst local and national Government it is imperative proposed reforms are delivered at pace and that industry continue to highlight areas where greater momentum and more ambitious planning reform is needed.

Top four issues that arise between local authorities and providers during rollout of communications infrastructure



02
03
04
05
06

The digital revolution requires a workforce boost

Meeting rollout targets will require a faster pace of deployment and more engineers and groundworkers, but MPs lack confidence in the UK’s ability to access requisite workforce skills, and the communications industry agree this is a challenge:

“Building and maintaining next-generation gigabit infrastructure is not an easy task and requires skilled labour and expertise. The Government must work with industry to ensure businesses like ours can avoid potential skills shortages.”

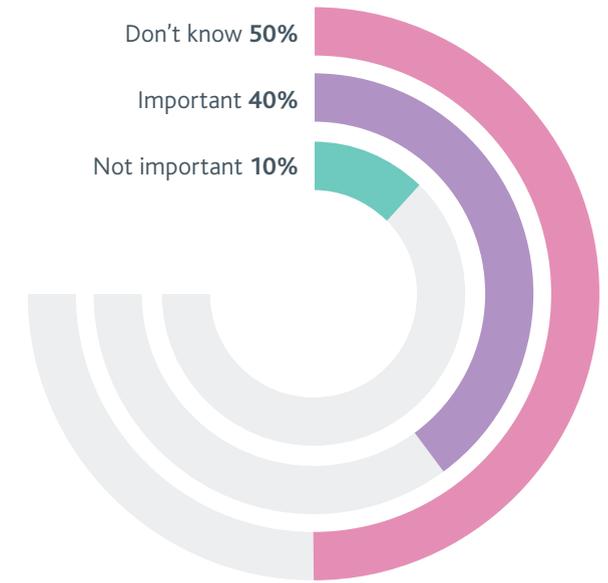
Virgin Media

The industry is taking steps to find solutions. CityFibre, for example, have in place training programmes for construction roles including fibre engineers and underground cabling operatives. The government aims to incentivise the training and employment of workers through interventions such as the Chancellor’s Plan for Jobs, the Apprenticeship Levy and expansion of Digital and Technical Skills Bootcamps. And business associations, such as the CBI, continue to pressure policy makers to create an immigration system that will bring in requisite skills. Each group of stakeholders must work together to help provide the labour force the UK needs.

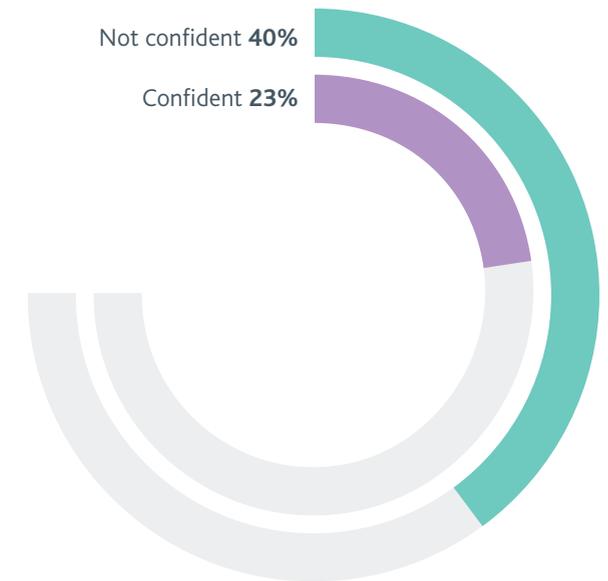
Digital connectivity must be regarded as an essential utility

Much effort by industry to rollout communications infrastructure and equipment has been frustrated by lengthy legal proceedings and acrimonious negotiations. This is reflected in significant issues around legal agreements and wayleaves¹⁴. The Electronic Communications Code was put in place to ensure access relating to connecting homes and businesses was considered a basic need—giving communications providers the same rights as electricity and energy providers. Despite subsequent reform, challenges remain and further adaptations to the Code are due. Our survey of policy makers shows low levels of awareness about the issue, suggesting pressure must remain in place until adequate amendments are achieved.

MP views on the importance of reform of the Electronic Communications Code



MP confidence that the immigration system will bring in the workers needed to roll out gigabit networks



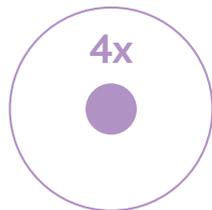
05 Local inaction

Local authorities have a significant role to play in accelerating gigabit rollout. It is therefore disappointing that under half of councillors report their local authority has a digital strategy or champion in place.

While the government has made clear its commitment to upgrading the UK's digital infrastructure, much of the delivery sits with local authorities. 82% of MPs agree future digital connectivity should be incorporated into local development plans and central government has urged local authorities to provide support for gigabit rollout. The role of local authorities lies in strategising, championing, and coordinating. For many, this includes having in place a digital strategy and appointing a digital champion. Our research indicates councils with digital strategies in place are more positive about the success of 5G mobile and gigabit broadband rollout than those without.



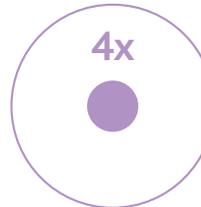
- Local authorities without a digital strategy
- Local authorities with a digital strategy



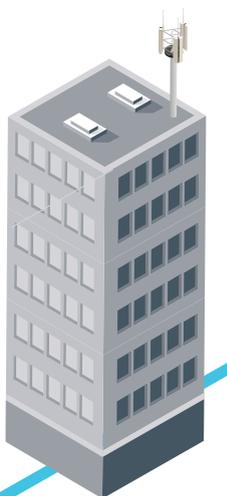
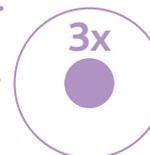
more likely to believe they have an effective relationship with mobile and broadband providers



more likely to believe their LA is doing enough to smooth the way for rollout of communications infrastructure



more likely to believe promoting and improving digital connectivity is a priority in their local area



Local authorities must be supported

Positive sentiment about the future of gigabit connectivity amongst councillors is far from universal

- less than half of councillors say their local authority has a digital infrastructure strategy in place or has assigned a digital champion
- less than a third believe their local authority is doing enough to smooth the way for rollout of communications infrastructure and equipment
- less than a quarter believe their local authority's relationship with communications providers is effective.

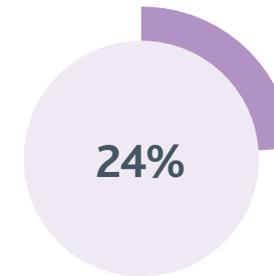
Few councillors believe their local authority has the information or funding it needs to raise awareness and understanding of faster, more reliable connectivity in the local community and less than half (43%) agree improving digital connectivity a priority.

Mark Hawthorne, the digital connectivity spokesperson at the Local Government Association, notes "Many councils are under greater financial pressure as a result of the pandemic and will struggle to prioritise work to remove barriers to digital rollout over key statutory services". This presents a clear downside risk to the government's delivery ambitions.

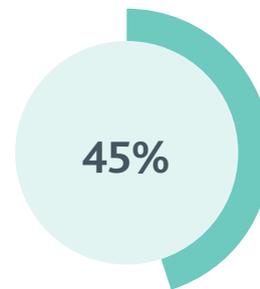
Councillors say their local authority...



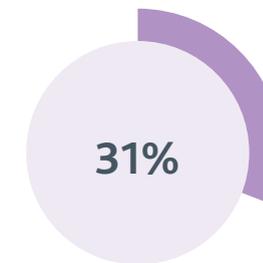
...has the funding it needs to prioritise digital connectivity



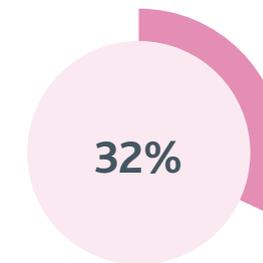
...has the information it needs to promote digital connectivity



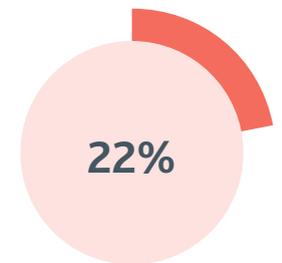
...has a digital infrastructure strategy in place



...has appointed a digital champion



...is doing enough to smooth the way for rollout



...has an effective relationship with infrastructure providers

06

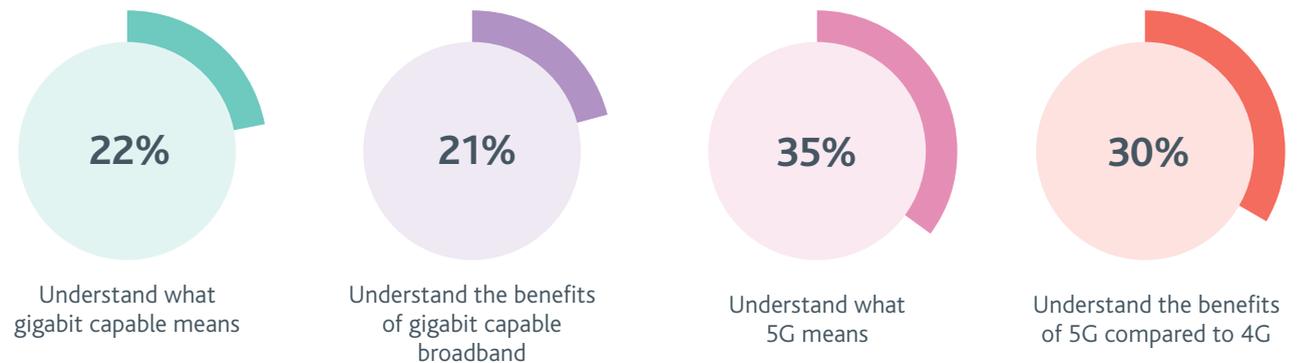
Demand deficit

If the UK is to benefit from 5G mobile and gigabit broadband connectivity, stimulating consumer demand is essential. Stronger uptake will provide a quicker return on investment and support the business case for gigabit networks.

At present consumer take-up of 5G mobile and gigabit broadband is limited. Of those premises that can access superfast broadband or faster just 69% take it up, while 5G devices represent just 10% of all active devices in the UK¹⁵. Our surveys highlight demand side risks including lack of awareness and perceived benefit as well as issues around cost.

Citizens' understanding of mobile and broadband connections

Under a quarter of UK citizens understand what 'gigabit-capable' means, and few recognise its benefits, while just a third understand which type of home broadband connection is available in their local area. When it comes to mobile internet, few understand what 5G means and many are unaware of its benefits relative to 4G. Less than 20% of citizens are aware which providers supply the best mobile coverage in the places they live, work and visit.



- 01
- 02
- 03
- 04
- 05
- 06

Lack of perceived benefit

27% of consumers have no plans to upgrade to 5G and 15% have no plans to upgrade to gigabit capable broadband. The foremost reason is that their current service already meets their needs. Overall, only a quarter (27%) of citizens believe nationwide access to 5G and gigabit capable broadband will be beneficial to them. These findings indicate that, for many, there is no real pull to adopt.

Cost related barriers

Over a third of citizens who do not plan to upgrade say it is because they are unwilling or unable to pay more for 5G—only a slightly smaller proportion say the same for gigabit broadband (see below). Research from Ofcom tells us these issues are more significant among specific groups, including young people aged 18-24, people with an impacting or limiting condition and those on a low income¹⁹. Providers recognise cost as a barrier, with many acting to surmount it. Some are offering heavily discounted broadband deals for those receiving financial support from the Government and O2 and Virgin Media have partnered with the Good Things Foundation to create a 'food bank for data'²⁰. Various stakeholders, including local and national Government, Ofcom, and industry, must continue to work together in a collective effort to facilitate the uptake and ensure that all consumers and businesses across the UK can benefit.

Business barriers to take-up of 5G mobile and gigabit capable broadband

The barriers for small and medium businesses are similar to those for consumers, namely lack of awareness, cost, and perceived benefit. 33% of small businesses and sole traders have not heard of gigabit capable broadband¹⁶ and 31% of SMEs do not see the benefit of gigabit capable technologies¹⁷. IT decision makers at large businesses have a greater understanding of the importance of investing into new technologies. But even in this domain, 26% cite barriers to investment related to cost, resistance to change from employees and business doubts about applicability¹⁸. 54% of IT decision makers at large businesses tell us their organisation has not invested in 5G, and 27% are yet to invest in gigabit capable broadband.

Of citizens with no plans to upgrade to 5G mobile or gigabit capable broadband...



65%

say their current broadband service already meets their needs



58%

say their current mobile service already meets their needs



37%

say 5G mobile will be more expensive than their current service and are unwilling or unable to pay more



28%

say gigabit capable broadband will be more expensive than their current service and are unwilling or unable to pay more

Conclusions

Future-proofing the country's digital infrastructure through rollout of gigabit-capable broadband and 5G mobile will have a profound impact on innovation and, ultimately, economic growth. To achieve this, policy barriers must be broken, industry investment incentivised, consumer and business demand stimulated, and local authorities funded—no one, and no place, should be left behind.



NATIONAL GIGABIT PROVISION MUST BE UNIVERSAL

It is clear from our research that rural areas risk lagging when it comes to digital connectivity ([02 The left behind](#)). The Government's £5 billion Project Gigabit will help support rollout in hard-to-reach areas. Progress includes the £1bn Shared Rural Network²¹ project which aims to extend geographic 4G coverage to 95% of the UK by the end of 2025 and may also help with 5G. In areas where no operator has plans to deploy gigabit capable internet connections the government must intervene to incentivise investment. The UK has some very remote places where it may be too expensive to build networks, even with substantial public subsidy. Here, the Government must explore innovative new technologies such as low-orbit satellites and high altitude platforms, which might be used to beam faster connections to homes and businesses.



BARRIERS TO ROLLOUT MUST BE REMOVED

The government must implement proposed changes to planning and the Electronic Communications Code at pace ([04 Stumbling blocks](#)). Industry and lobby groups should keep up pressure where they believe amendments need to be more ambitious, or where the Government lack of momentum in implementing change. The telecoms sector must ensure that it is taking maximum advantage of the Government's skills and retraining offering (for example, the Apprenticeship Levy) and Government must engage with industry to make sure its Point-Based immigration system is bringing in enough groundworkers and engineers while domestic talent is trained.



LOCAL AUTHORITIES ARE CRUCIAL

Our research shows that local authorities have a vital role to play in getting the UK connected ([05 Local inaction](#)). They must have access to the information and funding they need to prioritise the importance of digital connectivity in their local areas, including advice on how to collaborate with charities to reach vulnerable and potentially left behind groups. We support GigaTAGs recommendation that 'Toolkits' should be developed by Government and disseminated to local authorities. These kits should contain information on the benefits of better connectivity, as well as the resources and campaigning materials needed to raise awareness and uptake of gigabit services locally. The government should consider putting funding in place to support these campaigns.



DIGITAL CHAMPIONS MUST BE ASSIGNED

Our research indicates that local authorities with digital strategies in place are more positive about the future of digital connectivity than those without ([05 Local inaction](#)). We therefore recommend government explores the opportunity to fund a digital champion in each local authority. Such champions are able to support and execute digital strategies, act as a go-to experts on digital connectivity and coordinate connectivity improvements. They can liaise with industry as well as with local businesses and residents to ensure they have the right connections for their needs—and they can work with different teams within their organisation to ensure that connectivity is a priority.



AWARENESS RAISING ACTIVITIES ARE REQUIRED

Our research highlights a lack of understanding amongst consumers and businesses when it comes to the benefits of gigabit broadband and 5G mobile ([06 Demand deficit](#)). It is therefore imperative that Ofcom and industry progress the development of common terminologies to describe broadband and mobile services and create use cases that can be used by providers when marketing them. Government should consider undertaking nationwide awareness-raising activities, using multiple platforms to reach citizens and businesses with information about the benefits of upgrading to gigabit capable connections.



NO SOCIAL STRATA SHOULD BE LEFT BEHIND

Providers are taking some steps to tackle affordability barriers negatively impacting take-up of broadband and mobile data ([06 Demand deficit](#)). Ofcom must continue to monitor affordability issues, including the availability of social tariffs. It is critical that these tariffs are visible to, and taken up by, relevant groups. They should be proactively promoted, provided at reasonable speeds, and offered by more providers than at present. We support GigaTAG's [recommendation](#) that policy makers should thoroughly review schemes currently in place to aid affordability and identify any additional measures required to help vulnerable people and low-income households access gigabit-capable services.

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21. The Shared Rural Network is an industry-led scheme, supported by a public investment of £500m and £532m from operators. It aims to help extend geographic 4G coverage to 95% of the UK by the end of 2025 with the biggest coverage improvements in rural parts of Scotland, Northern Ireland and Wales.

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