

How Connected Are You?

A Report Into Perceptions
About Connectivity



Mobile^{UK}

LIVE BETTER
CONNECTED 

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About Mobile UK

Mobile UK is the trade association of the UK's mobile network operators (MNOs) - EE, Three, Virgin Media O2 and Vodafone. Mobile UK's mission is to realise the power of mobile to improve the lives of our customers and the prosperity of the UK.

www.mobileuk.org



Mobile UK Campaigns

The Live Better Connected awareness campaign by Mobile UK is designed to raise awareness and educate how we all, and wider society, rely on mobile connectivity for every aspect of life.

www.mobileuk.org/live-better-connected



Mobile UK launched Building Mobile Britain in 2018 to support the mobile industry's collaboration with national and local government, regulators, industry, consumers and citizens to overcome the challenges to expanding mobile networks.

www.mobileuk.org/building-mobile-britain



The #5GCheckTheFacts campaign provides factually accurate information about 5G and offers answers to common queries to help improve understanding.

www.mobileuk.org/5g-and-health

About This Report

The report was produced by Mobile UK with assistance from Purplefish and Block B design. Purplefish is an award winning UK PR and communications agency:

www.purplefish.agency

Methodology

This report analyses the results of public research conducted by Mobile UK as part of its *Live Better Connected* campaign. It explores the mobile-connected habits and attitudes of the public in the UK and how being connected through mobile networks is intrinsic to the way we live, work and interact. It also examines public sentiment towards infrastructure and whether often publicised objections to new mast sites and infrastructure upgrades really reflect the attitudes of the British public.

The research was undertaken in two parts. Firstly, through an online interactive survey designed to explore people's perceptions about how connected they really are compared to how connected they might *think* they are. Over 1,000 UK adults took part in this survey undertaken between July and November 2023.

The survey first asked people to estimate the number of devices they use which require connectivity. They were then provided with a list of commonly used devices and asked to select each one they use or access. The results provided a more accurate figure of the devices they were connected to.

The second part of the research was conducted face to face via 107 on street public interviews over a two-day period in Bristol and Somerset. The interviews were conducted at random and were intended to gauge awareness of how mobile connectivity works. Questions were also put to participants asking how they feel about mobile infrastructure in our towns, cities and rural areas.

Respondents were shown a selection of images of different types of common infrastructure and asked to identify those that they felt were used in the delivery of mobile networks and connectivity. They were then asked to identify a real-world example located in the immediate proximity.

No payments or incentives were offered, and respondents represented a range of age/gender/ethnic/professional status.



Introduction

Living in a connected world

We live in a world dominated by connectivity. Whether in your home, at work or in public spaces you will see people and machines utilising connectivity everywhere. This could be via a mobile phone, using the internet via a laptop or tablet, or even a smartwatch. People now use mobile networks to access banks, travel, track physical activity, shop, meet and communicate.

In the UK alone, with a population of 68 million people, there are over 87 million active mobile subscriptions.¹ But perhaps more astonishing is the growth of Internet of Things (IoT) which at 17 billion connected devices worldwide, is greater than the number of human beings on earth. This figure is set to double again by 2030.² One way or another - we are all connected. But how aware are we of our connected lives? That's the question this report will answer.

The UK's connected future

Our growth and dependence on mobile connectivity is recognised by the UK Government. The rapid rollout of 5G is a key priority alongside the extension of 4G coverage to 95% of the UK's geographic landmass via the Shared Rural Network.

The mobile network operators (MNOs) in the UK are rising to this challenge by investing around £2 billion a year to ensure that people and devices using the mobile networks have the capacity and quality of service they need, when they need it. Currently, the industry is rolling out 5G and further extending reliable 4G coverage into some of the remotest areas of the UK.

However, while there is recognition of the vital role connectivity plays in life, what has not been investigated before is public understanding and perception of this connectivity and how connected they are versus how connected they *think* they are. Further, these perceptions and associated levels of awareness have not been studied; in doing so, this report offers insight into the level of acceptance of the infrastructure needed to enable connectivity.

In seeking to answer these questions this report analyses public awareness of connectivity and whether our dependence on it is balanced with the obvious need to deploy new and upgraded mobile infrastructure. Equally, it explores how much people understand about where or how infrastructure is sited and installed, or do we just want our mobile networks to work and be reliable? And finally, whether the planning system is reflecting modern needs for connectivity or focussing on outdated views or misperceptions that could be impeding the rollout of mobile networks. This report explores these questions and provides a set of recommendations to facilitate the policy discussion around this important debate.

80%

of people underestimated how many connected devices they use



Executive Summary

This study set out to ask simple questions, ‘How connected are we?’ And, ‘Do our perceptions match reality?’

The simple answer is ‘no’ and the gap between perception and reality is growing. In fact, we are grossly underestimating our connectivity, with 80% of those surveyed stating that they used less than ten connected devices, with 40% of those suggesting connections between just one and four devices. In reality, the average person used 14 connected devices. This is itself a conservative estimate because most people will have multiple numbers of one device in a household, for instance, smart TVs and speakers, laptops and tablets, and many other devices that have integrated connectivity into their functionality, but which have become part of the furniture.

While knowledge of the physical nature of the infrastructure was limited there was a clear understanding that accessing a mobile signal requires mobile infrastructure nearby. Added to this, over half of respondents either welcomed, or were not bothered, about mobile infrastructure being located on their street. Those people who were less welcoming of infrastructure in their area provided reasons beyond simple aesthetics, such as unevidenced health concerns. This suggests that the planning system is being held up unnecessarily and not working towards providing the essential connectivity which this survey has shown people are clearly dependent upon.

In reality, the average person used 14 connected devices. This is itself a conservative estimate because most people will have multiple numbers of one device in a household

However, while this shows a clear and growing dependence on connectivity, the unknowing nature of it also highlights a limited understanding of how it all works. The study showed a widespread inability to identify mobile infrastructure, the towers, masts and cells that provide our essential mobile signals.

In fact this study found that when asked, 84%, said they feel it is important to have a mast near their home with a third of people saying they would actively welcome a mast at the end of their road and a further 15% not bothered at all. This is perhaps surprising when press coverage regarding the installation of mobile masts often paints a negative picture and tends to represent a vocal minority.

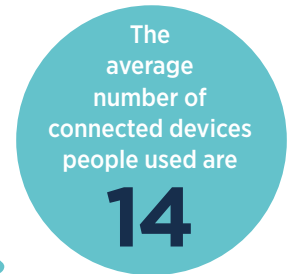
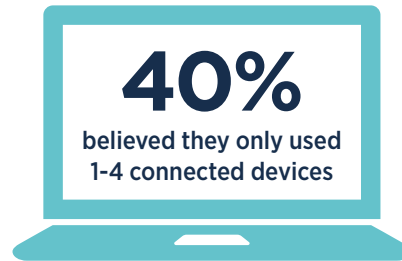
These results indicate that more can be done to familiarise people with the benefits of this essential infrastructure. However, one might also deduce that the mobile operators have been doing a good job enabling it to fit into the existing street scene.

What is clear is that an honest discussion with residents is required and local leadership is required to better advocate for the benefits of connectivity and that local authorities should give more weight to economic and social benefits.

Summary of Results

Perceptions

- The majority of people underestimated the number of connected devices they use with 80% responding that they were connected to 1-9 devices.
- 40% believed they use only 1-4 connected devices.
- The average number of connected devices people use are 14.



46%

of respondents stating
they use activity trackers

Everyday uses

- The main use of connected devices continues to be communication with 96% of people recording instant messaging as their main form of activity, followed by talking with friends and family at 90%.
- Health is becoming an important tool for people to connect with 46% of respondents stating that they use activity trackers.

Attitudes to and dependence upon mobile Infrastructure

- Mobile phones are considered by 79% of people to be important or very important to their daily lives.
- A quarter of people stated they can't live without their mobile phones.
- Only 14% of people believe they have a good understanding of how mobile connectivity works.
- 83% of people said that they understand that a mobile signal is stronger the closer you are to the infrastructure the broadcasts it.
- 84% of people think it is important to have mobile infrastructure within range of their home.
- Over half of respondents said that they would welcome, or that it wouldn't bother them, if a mobile mast was situated on their street.



84%

think it is important to
have mobile infrastructure
within range of their home

Perception vs. Reality: How Connected Are We?

How connected are we? This was the question that was asked to over 1,000 people from across the UK. What was clear was that how connected people think they are is very different to how connected they really are. Mobile UK conducted this study as part of the *Live Better Connected* campaign over several months via multiple online channels, including social media, asking people ‘How Connected Are You?’.

The survey asked people to estimate the number of devices they use in their daily lives which require connectivity. This question was then followed up by asking people to identify devices they actually use from a supplied list. The results showed a clear mismatch between people’s expectation and their real-life usage.

The study found the vast majority of people, 80% (fig.1), heavily underestimated the number of connected devices they use by stating that they are connected to only 1-9 devices. This contrasted with the actual number of devices they use. When they were asked to identify from a list the average number returned was 14.

Of those that did underestimate their usage it was even more pronounced by two-fifths of survey respondents who estimated they used only 1-4 devices. In fact, only one-fifth (20%) of respondents correctly estimated their usage of 10 or more devices. For one respondent who suggested they only used 1-4 devices they found out they were in fact actually connected to 27.

Disconnected reality

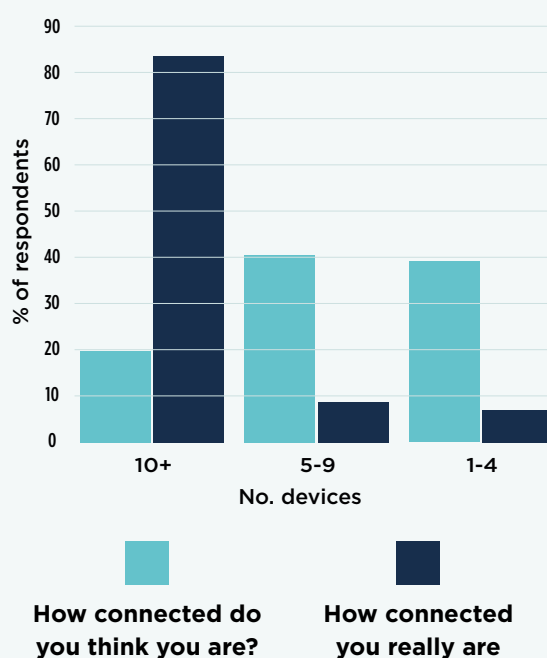
These results provide a fascinating glimpse into how people perceive their connectivity and suggest that many who actively take advantage in being connected don’t necessarily equate this with actually being connected, take it for granted, or are unconscious of it.

Awareness levels were found to be very low, and, in many cases, very far removed from reality. Even these results can be considered conservative as the survey did not ask people to count where they have multiple devices of the same type. For instance, in a typical family or multiple occupancy household there are often several connected devices such as televisions, security cameras, mobile phones, laptops, speakers or sensors.

It’s now commonplace to have connected speakers and a range of devices in almost every room and many will be connected to mobile networks as well as fixed broadband (e.g. in the case of video doorbells). This further emphasises the prevalence of connected devices which have become, quite literally, part of the furniture.

Further, the study highlighted that devices such as smart speakers or fitness trackers are not necessarily associated with being connected or people are not aware or ignorant of the fact that they operate through the internet or mobile networks. Indeed ‘mobile’ still suggests a mobile phone to many. This research shows that awareness of what *is* connected or *can* be connected or used via mobile networks is low as shown by the disparity between the guessed number of devices compared with the actual number. Indeed, connectivity has become so embedded into our everyday lives as mobile signals aren’t visible - that people are not always cognisant of it.

Figure 1: How connected people think they are vs. reality chart



Demographic Factors

As part of the study respondents were asked their age range, income bracket and employment status to see if there was any correlation with demographic factors when looking at connected habits.



Age

Perhaps at first glance surprisingly, the highest connected age group was the 40-49 age. This group reported an average number of 14 devices. Their awareness of their own connectivity was also higher compared to other age groups. 27% people in this group correctly estimated they were connected to 10+.

When compared to the lower age group which is often said to be the most connected generation – Gen Z, those in the 19-29 category were connected to an average of 11 devices (20% less than their older counterparts). What was even more interesting was a stark difference in awareness of their own connectivity with only 6% of this group gauging their connectivity accurately by selecting being connected to 10+ devices. This could be explained by virtue of the fact that for younger demographics connectivity is just a given. As the first smartphone generation – they have literally grown up with mobile devices being all pervasive through every aspect of living. Unlike their older peers who have adopted new technologies as they have emerged.

21%

of people access the internet only through mobile phones³

15+

devices for households with an income over £75,000

Income and wealth

The research also showed income to be a factor in mobile connectivity. The higher the household income the more devices people are using – 9 devices on average in households with under £9,999 annual income compared to 13 devices for households with income between £50,000 - £74,999 rising to 15+ devices for over £75,000 household income.

This maybe explained through income levels where affluence is an indicator that someone will have chosen and purchased more devices to enhance their home, work or lifestyle. The rise in home working has led to an accumulation of more devices and enhanced tech to work remotely from any location.

Employment

Those working full time are 50% more connected compared to those who are not working/unemployed.

The fact that those not working or unemployed are less likely to be connected is also a factor when considering equal access to work and job opportunities. The majority of job vacancies are advertised online in the UK and many are now applied to via a mobile application. This puts people that are less connected at a disadvantage and may contribute to the growing digital divide in the UK.

91%

of all employers are currently using social media as part of their hiring process⁴

Mobile Connectivity in Everyday Life

As well as assessing the number of connected devices we use, the research also looked at behaviours and how we use mobile devices.

By far and away, the main activity we undertake using mobile connectivity is to connect or communicate with others. Figure 2 shows the leading form of communication is instant messaging, at 96%, which came in ahead of talking with friends and family at 90%.

In second place came the desire for information with 84% using mobile connectivity to search the internet or to keep up with the latest news. The British obsession with checking the weather came next at 83% of respondents.

The research also highlights how mobile connectivity is altering the way we consume goods and services. The results show that we now undertake many activities via our mobile phones, which would have previously required a physical presence. For example, over three-quarters of people indicated that they now regularly shop (77%) and bank online (76%), and just under half (44%) buy their groceries regularly using the convenience of their phone, representing a changing

dynamic for the nation's high streets and the continuing growth of the 'app economy'.

Travel is also a sector experiencing dramatic change through mobile usage. Trips are increasingly planned and booked using mobile phones, with nearly two-thirds of people (63%) saying they plan their journeys online and over half (55%) booking travel and holidays that way.

Another aspect of life where mobile activity is changing our behaviour is through the ability to seek support and guidance via mobile connectivity for health and wellbeing. The survey found that trackers and wearable technologies are enabling us to use technology to help us keep fit and healthy with under half (46%) of those who completed the survey stating that they actively track their fitness/steps via their mobile phones. The rise of app-based fitness is also evident, with 14% respondents taking part in app-based fitness classes.

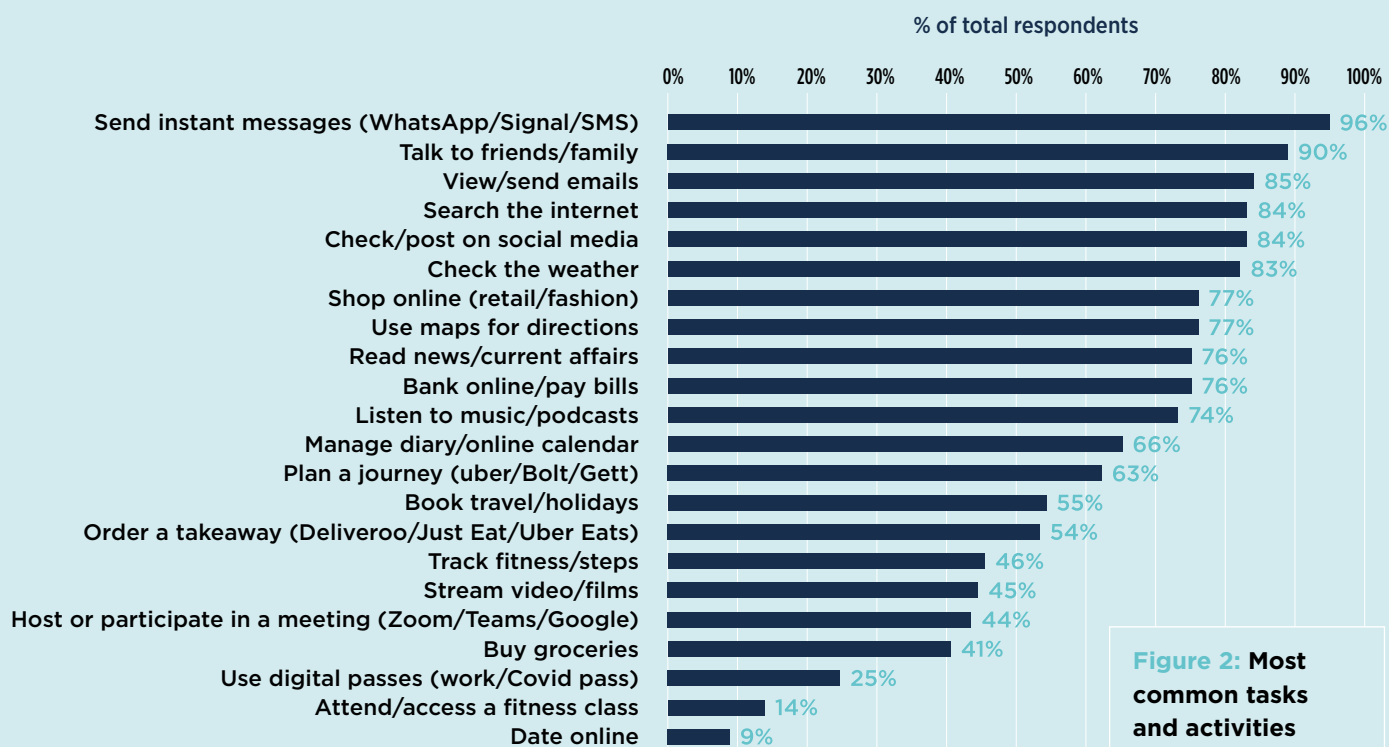


Figure 2: Most common tasks and activities



Out and about

Mobile connectivity is, by its nature, not limited to a single location. While this study found, as expected, that the use of a mobile phone is the most utilised device when out and about at 83%, the research also showed that we depend on a mobile signal for many other devices even if we don't realise it.

In an increasingly mobile connected world remote working and always being connected-on-the-go has become embedded into society. Results showed nearly two thirds of survey respondents are connecting their cars (64%) to mobile networks to make calls when driving, and two-fifths (42%) use their mobile phones to connect their laptops to the internet.

Tickets, contactless payments and paperless travel are also an area where a mobile signal is increasingly becoming necessary with just under half of respondents (43%) highlighting their use of e-tickets for travel on buses, trains or planes. Additionally, navigation and access to music/entertainment apps via a connected car was common by 42% of those who took part.

In a sign of rapidly changing times and our thirst for ever more information the humble timepiece has seen a move into the smart era with over a quarter of people (28%) recording their use of a connected smart watch.

Top five uses of mobile networks when out and about



64%

Connected car (using mobiles to connect to cars when driving to make phone calls)



43%

Using e-tickets to travel for buses/trains/planes



42%

Connecting through a laptop



42%

Connected car to access navigation or music/entertainment apps when driving



28%

Smart watch

Attitudes to Mobile Infrastructure

Mobile infrastructure is essential to providing a mobile signal. Data usage is increasing rapidly with Ofcom predicting growth of 15% year-on-year and one mobile operator reporting that its average user now consumes 25GB per month⁵. To cater to this demand the mobile networks are deploying at pace both 5G and 4G. However, to access that connectivity infrastructure must be in place, and the quality of the signal is then dependent on how close you are to that infrastructure.

Importance of connectivity

The survey found that connectivity is extremely important, with over three-quarters (79%) of people saying their mobile is important, or very important, to them. If there is a loss of signal, 81% find the loss of signal problematic to their lives, and 28% stated they can't live without their phone if there is a loss of signal.

Mobile UK is calling for Digital Champions, funded by central government. To coordinate local authorities' digital strategies and raise awareness of mobile infrastructure and policy.

Public understanding of mobile technology is surprisingly limited. Just 14% of people felt confident in their knowledge of mobile connectivity, with 42% admitting to no understanding at all.

This limited comprehension is further highlighted by a lack of recognition of the physical infrastructure supporting mobile networks. When shown images of common infrastructure, 45% couldn't identify a rooftop installation, and 35% failed to recognise a mobile phone mast. This confusion was even more pronounced in real-world settings: 79% of people couldn't identify a phone mast in plain sight, and 35% couldn't recognise any mobile infrastructure at all. Misidentification was also prevalent, with 42% mistaking a television transmitter for mobile infrastructure and 40% identifying a radio tower.

This data undermines the current planning system's favouring of public perceptions over the broader economic and social benefits of mobile infrastructure. Further, a greater public understanding of how mobile networks work may reduce resistance to new infrastructure within the planning system.



79%

of people say their mobile phone is important, or very important, to their lives



81%

found the loss of signal problematic



28%

stated they feel they can't live without their phone if there is a loss of signal



42%

admitted they had no understanding of mobile connectivity

Summary of results



83%

stated they had a limited understanding of how mobile signals and connectivity work



92%

understand that a better signal is achieved the closer you are to where it is broadcast from



84%

understand that the closer you are to mobile infrastructure the better the signal will be



84%

think it is important to have mobile infrastructure within range of your home or business



51%

are not bothered or would welcome a mast on their street

What respondents were much more definitive about was the impact connectivity, or lack of, has on them with over half of people (53%) saying it is annoying if they have no connection and more than 1 in 4 people (28%) saying they feel they cannot live without their mobile for day-to-day activities. Only 18% people said it didn't matter if they cannot get a good mobile signal.

	From an image	From a real-world setting
Percentage of people not able to identify a rooftop installation	45%	75%
Percentage of people not able to identify a monopole	35%	79%

When questioned about proximity of masts the results counter assumptions made about objections to masts. A clear majority of people – 84%, said they feel it is important to have a mast near their home. 83% understood that the closer you are to mobile infrastructure, such as masts, the better the signal will be.

Lastly, respondents were asked how they would feel if they had a mast at the end of their road. Almost 1 in 3 people said they would welcome it. 15% said they would not be bothered. Of people who said they would not like it, when asked why, 26% said they would not like it on the grounds of aesthetics. However, given the mixed responses in identifying what mobile infrastructure actually looks like, this calls into question the weight of this sentiment. Only 16% mentioned health concerns – this is in stark contrast to the heightened levels of concern seen during the pandemic with peak levels of misinformation relating to 5G and Covid circulating online.

These sentiments reflect the position that mobile infrastructure is critical to our daily lives and therefore must be a high priority consideration by central and local government in town planning, future prosperity and when considering planning decisions for new and upgraded infrastructure. The recommendation for embedding dedicated Digital Champions within local authorities would enhance public awareness and support digital inclusion strategies.

Assumptions that objections are widespread or that public opinion is negative towards infrastructure was not borne out in these interviews. Are objections based on accurate facts and genuine knowledge? It is likely that negative sentiments are vocalised by a loud minority – given that 84% people questioned agreed it is important to have mobile infrastructure in range of their homes.

Indeed, these sentiments are also borne out on attitudes towards infrastructure which supports the roll out of broadband. A 2024 report by the Internet Services Providers' Association (ISPA) found:

75% of British adults surveyed accept having telephone poles in their street if they deliver great broadband

69% surveyed would accept a new telephone pole in their street today if it delivered better broadband to their house and community

Conclusions & Recommendations

The results of this study indicate a mismatch between people's perceptions about how connected they are, and how those perceptions feed into their understanding of mobile infrastructure.

While people are clearly more connected than they think, with an average of 14 devices compared to the 1-9 most people think they use, their understanding of how mobile infrastructure works is low which continues to have an implication surrounding people's acceptance of it.

Mobile phones are considered essential to our daily lives and we clearly understand that ensuring a good signal means it is important that infrastructure is within range.

This report highlights the implications for mobile operators of deploying critical infrastructure for the whole country, which is being held up by localised objections, which, as this report finds, can often be based upon misperceptions and limited awareness.

In addition, while the physical infrastructure might be local the users who depend on it may not be. By its nature mobile users will be made up of those moving around the national network and those who are more local. At any one time many people, and increasingly many 'things' (devices) will connect to an individual mast, such as emergency services (e.g. ambulances), commuters, runners, delivery drivers, tourists, shoppers etc., transiting through the area where a mast is located.

Masts are now a fundamental part of the national infrastructure. This study highlights the disconnect with people's need for mobile connectivity and the continuing pushback at a localised level to host the infrastructure which is further compounded by the planning system which continues to be impacted by misperceptions and limited understanding reflected in this survey's results.

What do these results tell us?

Anecdotally, several respondents, unprompted, recalled negative media reporting on masts and 5G but the feedback was largely one of acceptance. This was clear when asked about the proximity of a mast to be able to get a good signal and with 90 of the 100+ respondents saying they understood a mast or infrastructure needed to be situated close to home or workplaces to facilitate a good service.

The face-to-face interviews demonstrated limited and low levels of understanding about how mobile connectivity works and even what it looks like. Mobile network functionality is an expectation of everyday life – this is borne out by the high levels of frustration when signal and connections are poor.



More than mobile

Results showed that overall, our perception of how connected we are is very low. This could be because many of the mobile devices we are connected to feel invisible. For example, most people associate being connected via a phone, but people do not always associate the same connectivity through cars, watches or everyday appliances and devices which rely on mobile networks to work.

This report highlights there is limited awareness of mobile infrastructure and how it fits into our surroundings. With a third of people unable to identify the most common form of mobile infrastructure and half unable to identify other types it suggests that further education is needed.

Further, the research also highlighted that when in a real-world situation, as opposed to seeing images, people could not point out or identify the mobile infrastructure around them. Mobile companies have been somewhat successful in blending in their infrastructure and equipment into our landscapes. Objections based on aesthetics may be down to outdated perceptions of what people think the infrastructure looks like, or indeed, confusion with other types of telecommunications or utilities infrastructure.

In conclusion, this report finds the need for connectivity is growing, the majority of people understand that to benefit from connectivity, the infrastructure behind it is necessary. It is therefore important that national and local planning frameworks and policies put greater emphasis on the social and economic good of mobile connectivity and that planning decisions are weighted accordingly. Additionally, it is understood the planning service is significantly underfunded which further exacerbates issues. Better resourcing in the planning service and digital champions to help promote mobile connectivity would be helpful. Further, it is important that local leaders have an honest discussion about the importance of mobile connectivity to local areas and the need for the infrastructure that sits behind it.



Recommendations

To satisfy the growing appetite for, and reliance on, mobile networks the mobile network operators need to be able to upgrade existing and install new infrastructure. Without this, the public, businesses and public services will not be able to take advantage of technical innovations and keep pace with the mobile world.

This report makes four clear recommendations based on public insight and attitudes and the need for greater investment in the industry:

1 Understanding is crucial to connectivity

Leadership from national and a local authorities and in conjunction with the industry is needed. Better education will safeguard the future of the UK's connected society.

2 Digital Champions

Dedicated roles are needed in every local authority area to help coordinate and prioritise digital connectivity and address digital exclusion.

According to Farrpoint 49% of local authorities do not have a digital connectivity strategy that is less than three years old. 47% of authorities have a digital champion but this is part of another role. Only 23% have invested in a dedicated role.

3 Better resourcing in planning

Increasing consumer demand, especially for data, requires mobile operators to invest continually in network coverage and capacity.

The planning regimes across the United Kingdom were set down in legislation that pre-dates the move to 5G technologies. Planning regulations and the advice that goes with them must be urgently updated to enable mobile operators to deploy their networks to meet rapidly growing demand. Without this people and businesses will not have access to wider network coverage and the latest technologies.

4 Local leadership

It's clear while awareness of what constitutes mobile infrastructure is low, the majority of people are somewhat comfortable with new infrastructure. What they are not indifferent to is a scenario where they are unable to access the networks they rely on.

More work needs to be done in areas needing new or upgraded infrastructure to convey the facts and debunk myths. Stronger public awareness and engaging in an honest debate with citizens about the benefits and importance of this infrastructure will lead to greater support to facilitate vital infrastructure to safeguard future connectivity.

Endnotes

- 1 Ofcom, Communications Market Report 2023.
- 2 <https://explodingtopics.com/blog/number-of-iot-devices>
- 3 Source: Mobile UK
- 4 <https://standout-cv.com/social-media-recruitment-statistics>
- 5 Ofcom Telecommunications Market Data Update Q4 2023

Further information & Sources

To take the challenge and see how connected you are visit:
www.mobileuk.org/how-connected-are-you-challenge

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