Driving Growth: The £230bn Opportunity of Improved Mobile Networks

July 2025



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About this study

BT Group asked Assembly to model the economic and/or social benefits to the UK that could be delivered by addressing low mobile network quality through different investment options including improvements to road and rail coverage, improved network resilience, and improved coverage and capacity in rural areas.

About Assembly

Founded in 2017, Assembly is an independent, London-based analyst firm providing custom and subscription-based research on regulatory, policy and legislative developments that affect communications markets and the wider digital economy. For more information visit <u>assemblyresearch.co.uk</u>

Foreword

The UK is mid-way through a profound digital revolution that can be the engine for economic growth and the key to public service reform: but only with the right policy and regulatory interventions.

Consumers rightly expect access to high quality voice and reliable data services, whenever they need them and wherever they are. And higher capacity and more resilient networks will provide the foundation for transformative new opportunities for business and public sector innovation. The right goal for the UK is to build the networks which delivers this level of service across the country.

This report sets out the potential benefits for the UK if we can get this right. Up to £230bn of economic value is on the line in the coming decade.

These are benefits that will only be unlocked if the UK can improve its capacity to handle more mobile traffic in the busiest parts of the country (worth £124bn); if it can fix gaps in road and rail connectivity (£57bn) and if it can make its networks more resilient and reliable (£45bn).

BT Group is already investing billions to build the networks which can make this vision a reality. Our standalone 5G (5GSA) network offers transformative solutions, delivering greater capacity, lower latency, and dedicated bandwidth for consumers and businesses. We've made great progress to deploy this network throughout more than 50 towns and cities, reaching over 40% of the population already.

Other UK operators are investing, too. But there are drags on commercial investment that are holding the UK back. Targeted Government action could help us go further and faster.

The current planning system adds significant time and cost when we try and deploy new network infrastructure, despite the clear community benefits which could be generated. The amount of spectrum we can use to improve coverage and build up cost-effective capacity is constrained – with too much spectrum being used inefficiently elsewhere. And too many SMEs and public sector organisations are struggling to make use of existing technologies.

Action is needed to tackle these challenges. Doubling the level of spectrum available to mobile operators is achievable, and would enable us to rapidly improve services across the country. Reforming the planning system to reduce unnecessary roadblocks would help accelerate network deployments. A long-term vision for accelerating SME and public sector tech adoption is also critical to creating a truly digital-first UK.

The time is right for decisive action. With the right support, the next 10 years could see the development and mass adoption of transformational improvements for the UK. Mobile networks can play a critical role in making these goals a reality.

Howard Watson

Chief Security and Networks Officer, BT Group

Without support, £230bn in growth opportunities are at risk

£124bn

Improved capacity in urban sites

- Increased adoption of Al and industrial use cases: £88bn
- Improved drone deliveries: £26bn
- Creative industries benefit: £9.5bn



£57bn

Improved road and rail coverage

- Increased productivity on rail passenger journeys: £12bn
- Autonomous vehicles enabled: £45bn



£45bn

Improved network resilience

- Boost to business productivity through reduced outages: £7.9bn
- Supporting the modernisation of the energy grid: £37bn



£3.1bn

Improved rural capacity and coverage

 Agriculture and tourism benefits: £3.1bn



Executive Summary

The UK benefits from high quality mobile networks, which offer an unparalleled range of competitively priced products and services. Significant investments from operators like EE have improved both the coverage and capacity of 4G and 5G networks, helping to support people across the UK to keep in touch with friends and family, to start new businesses, and to experience the best of what the internet has to offer. Prices have remained low, allowing consumers to benefit from these networks at internationally competitive prices.

While EE's networks have been independently assessed as being the best in the UK, many international competitors benefit from mobile networks of similar or better quality – placing the UK at a risk of falling behind in the race for growth.

There are many reasons for this - including an outdated planning system and additional costs imposed on operators by previous Governments. However, the ambition should be for the UK to have the most reliable, resilient and high capacity networks available. Achieving this goal will require the following issues to be addressed:

- Improved coverage and capacity: The coverage and the capacity of mobile networks are critical to the quality of a consumer's experience. Rising demands have placed additional capacity burdens on mobile networks, meaning that stronger mobile signals are now needed just to maintain the level of service consumers previously experienced. There are also a huge range of commercial and public sector innovations which could be unlocked with access to high capacity mobile services.
- Improved road and rail coverage: Consumers continue to report specific challenges with connectivity on the rail network, hindering their productivity. There are also significant opportunities which the UK could unlock through the development of a fully digitalised road network.
- Improved resilience: The recent power outages in Spain and Portugal have demonstrated the criticality of resilient networks. Improving power resilience continues to represent the most cost-effective way to build resilience across all digital and physical networks. Improved mobile network resilience would, however, be an important backstop in the event of lengthy power outages.

Some of these issues will be partially addressed through the deployment of new standalone 5G (5GSA) networks, which represent a transformative upgrade to the UK's mobile infrastructure. 5GSA offers greater capacity, lower latency and the ability to deliver dedicated bandwidth for consumers, business and public sector users. EE's 5GSA network is growing rapidly, and is already available across more than 50 towns and cities, reaching over 40% of the UK's population.

However, independent estimates suggest that there is a significant gap between the sector's investment capacity and what would be required to deliver nationwide 5GSA, potentially reaching over £20bn. ¹ Further investment would also be required to address specific challenges relating to resilience, mobile coverage in rural areas and road and rail coverage.

We're proud to have invested billions to improve mobile coverage and capacity, and plan to make substantial additional investments throughout the remainder of the decade. The challenge which the UK faces is that if we and the wider sector maintain these investment levels the UK will simply maintain our relative performance against other nations and the opportunity to step change growth will pass us by.

Revenues across mobile operators have been flat in real terms for several years, even as consumer and investment demands have continued to grow - and despite efforts to differentiate quality and offer new services. Without new revenue opportunities, it is much more challenging for the sector to increase investment. There are

¹ Digital Connectivity Forum. Available at: <u>The-Investment-Gap-to-Full-5G-Rollout.pdf</u>

however opportunities to reduce the cost of network build – as well as to increase the availability of spectrum which represents a cost-effective way to improve coverage and network capacity.

The level of new investment required will be significant. But the opportunities which could be unlocked could underpin a new wave of growth and innovation across the UK. We've worked with Assembly Research to model what the benefits could be if the UK had sufficiently high-quality mobile networks.

Using conservative estimates, Assembly have modelled that the benefits to the UK of delivering a highly resilient, nationwide high-capacity network could unlock up to c.£230bn in economic benefits by 2035, as well as a broad range of social and environmental benefits.

Recommendations

Unlocking these opportunities through accelerated investment in mobile networks should be a Government priority. DSIT has previously taken a long-term strategic approach to unlock investment in full fibre broadband via the Fixed Telecoms Infrastructure Review. This helped to kickstart an unprecedented wave of investment in full fibre networks – accelerating full fibre coverage from around 4% to over 75% today.

A new Mobile Markets Review is now needed which takes a similarly ambitious approach to unlocking investment in mobile networks. It is positive that the Government has now committed to delivering a new Review. This should take a holistic approach to assess how best to accelerate mobile investment.

The Mobile Market Review should also look to help operators deliver greater coverage and capacity in a cost effective manner through releasing more spectrum, reducing deployment barriers and taking broader steps to improve the investment case for mobile networks.

In the short term, policymakers should consider:

1. Rapidly expanding spectrum availability

A total of c.1.1 GHz of spectrum is currently available for national mobile services - but DSIT should set out a pathway to double this to c.2.2 GHz.

This could be achieved through a rapid opening up of the 3.8-4.2 GHz, upper 6 GHz and 600 MHz spectrum bands - which could be used more efficiently by mobile operators to improve coverage and capacity, deliver rail coverage improvements and support future 6G requirements.

This would drive real growth opportunities – the GSMA has estimated that 300 MHz of spectrum at 3.8-4.1 GHz would be worth up to c.£3bn for national mobile operators and lead to a c.£4.6bn increase in GDP, and that access to 600MHz could reduce the costs of 5G deployment in rural areas by up to 30%. Access to these spectrum bands would also enable operators to quickly and efficiently improve network capacity in high density areas.

2. Providing practical support for network deployment

The recently published Infrastructure Strategy committed to exploring amendments to the planning system. Any reforms need to be delivered quickly to ensure that they can rapidly support accelerated deployment.

The system is now significantly under-resourced, which causes significant delays to planning applications. Amending guidance to prioritise the public interest in improved mobile connectivity, and enabling monopoles up to 20m in height would also provide boosts to connectivity. These changes could help to expedite the roll out of individual sites by 12 months.

There are also increasing issues with maintaining coverage and capacity as a result of new regulations from the Building Safety Regulator. Lengthy applications to the BSR are now needed to make minor changes to rooftop apparatus in high rise buildings – which is a particular challenge in cases where operators need to secure a replacement site to maintain coverage in urban areas. This issue is also causing delays in the deployment of full fibre in these buildings.

3. Longer term opportunities

There are longer term opportunities to fully digitalise the UK. Some of these will be more expensive to deliver compared to the short term opportunities highlighted above, but remain critical to support investment and accelerate the transition to a digitalised UK.

Operators pay around £300m every year in **Annual Licence Fees (ALFs)** to use spectrum which could otherwise be re-invested to improve mobile services. Government and Ofcom should – if not remove ALFs – at least ensure that the funds raised are made available to be re-invested in the sector.

In particular, investments could be prioritised to address major pain points for consumers, such as improving rail coverage, improving capacity in urban areas, or supporting improved resilience. Reinvesting the remaining public funds from the Shared Rural Network could also drive further improvements in the quality of mobile networks, such as improved rail coverage.

Net neutrality reform could enable commercial flexibility (by forming a two-sided market) and could incentivise efficient network use and generate new revenue sources for MNOs, which could be re-invested to enhance mobile network infrastructure and support economic growth.

Legacy network retirements across voice, mobile and TV would result in a greener and more cost-efficient networks, which would also deliver improved consumer experience. While there are a number of complexities to these processes – not least ensuring that vulnerable customers are protected during the transition – retiring these networks is an important and necessary step for the UK to take. Support from the Government and Ofcom would help to ensure that these networks can be efficiently retired while protecting consumer interests.

Public sector and SME 5G demand should be leveraged to improve public sector delivery, and would generate new revenue opportunities for mobile operators. One example that should be considered is the piloting of dedicated network slices for critical sites such as hospitals. Similarly, promoting tech adoption by SMEs through Australian-style tax incentives for technology investments would improve productivity levels as well as driving improved revenue for mobile operators.

Sustainable rural network infrastructure: our capacity to roll out to new sites is also limited by the need to comply with non-commercial rollout targets, including for the Shared Rural Network. Ofcom should be more open to more network sharing in rural areas or to support rail coverage if MNOs seek it.

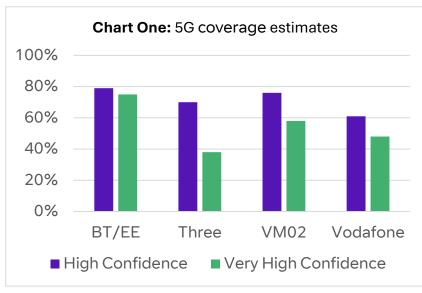
The case for mobile investment

The quality and coverage of mobile networks has improved significantly in recent years.

Of com has found that outdoor 5G coverage from at least one mobile operator has increased from around 40% in 2021 to around 90% in 2024. 2

The amount of data used by consumers and businesses has also continued to grow. In 2021, monthly data traffic was less than 600 petabytes, which has now grown to over 1000 petabytes in 2024. Monthly 5G data traffic has grown from 17 petabytes to 227 petabytes over the same period. ³ Significant investment has gone into mobile networks to ensure that they have the capacity to manage this level of traffic. Consumer and business demands are likely to continue to grow, albeit potentially at a slower pace than previously.

At the same time as these increases in coverage and data use have been delivered, consumers have continued to benefit from low retail prices. Ofcom has estimated that the average price of an



Source: Ofcom analysis of operator data (September 2024)

average use basket of mobile services was 5% lower in 2024 compared to 2023 – and that the same basket of mobile services was 23% lower in 2024 compared to 2019 in real terms. 4

The price of mobile services also compares favourably to international competitors. Ofcom has estimated that UK mobile services are cheaper than in the US, Spain, Italy, and Germany. ⁵

EE's networks

We have made substantial investments to deliver the best quality mobile network in the UK.

Ofcom has shown that EE's networks provide the best outdoor coverage in the UK, offering significantly better coverage than any of our competitors. ⁶ This reflects our historic investment to improve mobile coverage in rural areas, as well as our more recent investments in the Shared Rural Network (SRN) – a partnership between industry and Government to improve rural mobile coverage.

EE was the first UK operator to launch 4G and 5G services, and is now the network leader in offering standalone 5G services, with our 5GSA network now available to more than 28 million people (over 40% of the UK's population) in over 50 towns and cities.

As a result, Rootmetrics – following a comprehensive period of independent testing of the performance of all major UK networks – has found EE to have the best mobile network 22 times in a row over the past 11 years,

² Connected Nations 2024, Ofcom. Available at <u>Connected Nations UK report 2024</u>

³ Connected Nations 2024, Ofcom. Available at <u>Connected Nations UK report 2024</u>

⁴ Pricing trends for communication services 2024, Ofcom. Available at <u>Pricing trends for communications services in the UK 2024</u>

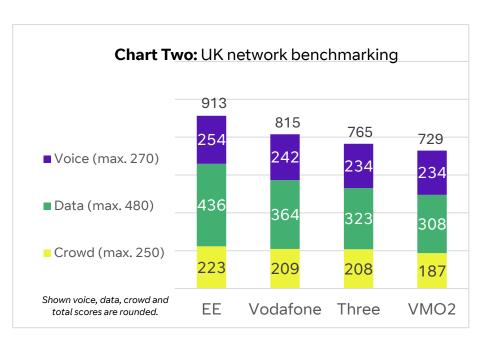
⁵ Pricing trends for communication services 2024, Ofcom. Available at <u>Pricing trends for communications services in the UK 2024</u>

⁶ Connected Nations 2024, Ofcom. Available at <u>Connected Nations UK report 2024</u>

awarding EE the Best 5G Experience prize in 2024. ⁷ EE also won far more awards than any other operator in their testing across the nations and in major metropolitan markets.

Further independent assessments of network quality from Umlaut have similarly found that EE's networks are the best in the UK. 8 Umlaut carries out a range of tests to assess the quality of mobile networks internationally, and has found that EE's networks offer the best voice and data services across the UK. The capacity of our network also beats that of other networks.

Consumer satisfaction with the quality of their mobile services is high – with Ofcom reporting overall satisfaction levels around 88%, with EE beating this sector-level average. 9

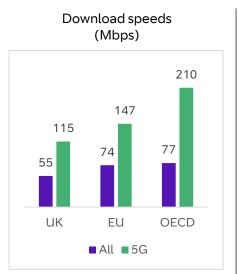


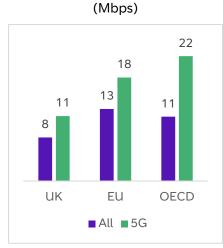
Why further investment is needed

Despite the level of investments which have been made to date, it is clear that there is more to do. The Government is right to focus on the UK's growth mission. A key driver of economic growth is the UK's international competitiveness – as this will influence business formation and opportunities for new business innovation.

There is evidence that the UK's mobile networks are less well developed compared to international competitors. Independent estimates from the GSMA suggest that mobile

Chart Three: Download and upload speed estimates





Upload speeds

download and upload speeds are lower than those of the EU or the OECD. 10

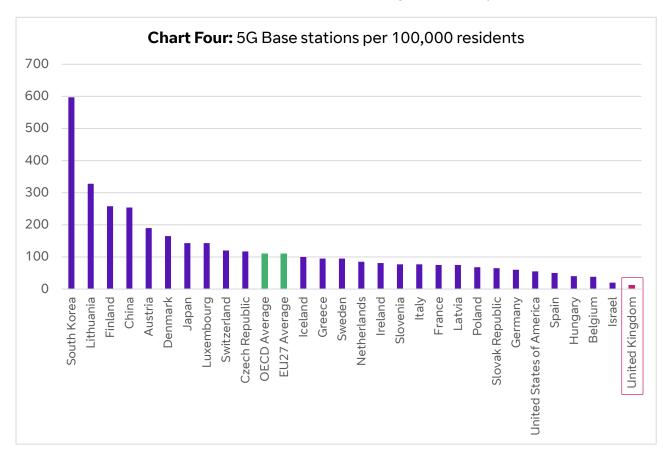
⁷ UK Mobile Performance and 5G in Review, Rootmetrics. Available at RootMetrics

⁸ 2025 Mobile Network Test in the UK, Umlaut. Available at <u>2024 connect mobile network test Uk</u>

⁹ Comparing Customer Service, Ofcom. Available at <u>Comparing customer service report 2025</u>

¹⁰ GSMA Intelligence analysis of data provided by Ookla. Available at Mobile Connectivity Index

One of the factors driving these lower speeds compared to international competitors comes from the lower number of base stations per capita in the UK compared to other countries. ¹¹ While consumers can have legitimate concerns about the placement of mobile sites, a burdensome and time consuming planning system has meant that fewer mobile sites are available to supports coverage and capacity compared to elsewhere.



As a result of these factors, the UK lags behind many 5G leaders as assessed by the GSMA. ¹² This places UK businesses at a competitive disadvantage compared to their international competitors.

While we are rightly proud of our network leadership within the UK - becoming the first UK operator to score above 900 in Umlaut's independent testing, there are other international providers which have higher scores. ¹³

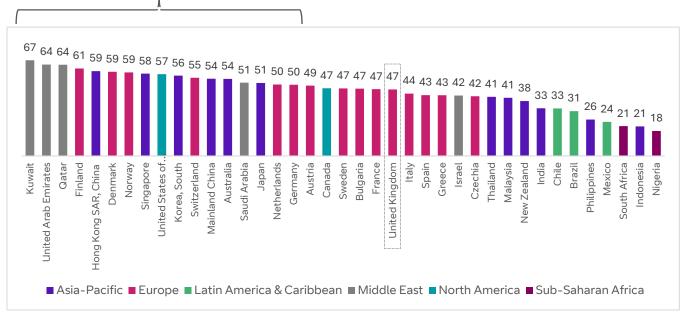
¹¹ Network Failure, Social Market Foundation. Available at <u>Social Market Foundation.</u> OECD data from 2023, UK data from 2021.

¹² 5G Connectivity Index (Q3 2024), GSMA. Available at <u>5G Connectivity Index | GSMA Intelligence</u>

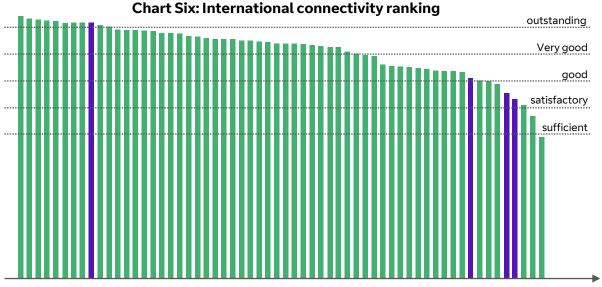
¹³ 2024 International Score Comparison, Umlaut. Available at <u>2024 International Score Comparison</u>

Chart Five: 5G Connectivity Index

Tier 1 Leaders (score above 50)



Source: GSMA Intelligence



Worldwide score comparison of mobile networks published by umlaut.

UK operators

There are therefore a number of opportunities which could be taken to improve the quality of the UK's mobile networks, including to:

Improve network coverage and capacity: Ofcom's decision to refresh how it represents mobile signal in its coverage maps is indicative of the UK's growing reliance on mobile connectivity when using data-intensive applications.

They also demonstrate that – despite the significant network investments which have been made – further investment is needed. It is right that mobile networks continue to evolve to meet these changes in consumer expectations. Further support from policy makers is however required to improve investment capacity.

Data requirements on the network have also continued to increase significantly. In particular, new innovations such as autonomous vehicles and ubiquitous IOT connectivity will place further demands on mobile networks. The introduction of 5GSA will help to support this growth in demand, but further investments will be needed to deliver a truly nationwide 5GSA network.

Improve road and rail coverage: Poorer quality road and rail coverage remains a pain point for many consumers. There are specific challenges with rail coverage including difficulties in providing service to a highly concentrated volume of consumers travelling inside a fast-moving train carriage, which can often be hidden underground in deep cuttings or tunnels. Beyond this, operators continue to report issues with gaining trackside access, making it more difficult to install new sites to improve coverage and capacity. Recent announcements in the Spending Review and Infrastructure Strategy will help to improve the quality of mobile coverage on the rail network, but further interventions will be required to to fully address these issues.

Improve resilience: The mobile network ultimately depends on a steady supply of electricity to function. We have invested to provide battery backups at a number of sites, and have overlapping coverage from multiple sites elsewhere, but these contingencies can only ever provide a certain level of protection from extended power outages. The recent experiences of Spain and Portugal have illustrated the need for further investment in power resilience, which will require further investment beyond the industry's current plans.

Fixing these issues could have transformative impacts on the UK. We commissioned Assembly to model some of the potential benefits which could be unlocked if the sector was able to close the gap with international competitors and deliver mobile networks which are ready to support the UK's growth mission.

Economic benefits of improved connectivity

Support for the wider investment case could mean that operators would be able to accelerate and expand investments, while spectrum reform and reducing deployment barriers would play a key role in enabling operators to boost coverage and capacity in the most cost-effective manner.

We commissioned Assembly Research to assess what the benefits to the UK would be if the UK was able to benefit from the networks underpinned by these policy reforms.

Using conservative assumptions, they estimated that up to £230bn in economic benefits by 2035 could be unlocked as a result. There would also be wider social and environmental benefits which this report has not sought to quantify. There could also be additional economic benefits which are generated which this report hasn't considered.

1. Improved overall network capacity in high traffic areas

One of the key benefits that new 5GSA networks could deliver will be a significant increase in network capacity available to enterprise and public sector users, particularly through the ability to provide dedicated bandwidth and advanced specifications to individual users. This will enable new innovations to be delivered at scale across the UK.

Assembly estimate that:

Improving 5G standalone coverage by 2035 could enable more than £88bn in economic growth through the industrial adoption of new technologies

Assembly have estimated that nationwide 5GSA coverage will unlock a new wave of innovation. Technologies such as AI/machine learning, XR, digital twins, advanced sensors, robotics and autonomous systems, and future computing have all been assessed by PwC as offering significant growth opportunities to the UK.



Assembly have estimated that 5GSA could enable more rapid adoption of these technologies across a wider range of sectors, generating up to £88bn in economic growth by 2035.

Improved 5GSA coverage could enable as much as £26bn of added economic value from drone adoption by 2035.

Drone networks are already opening up innovative new opportunities, but could be scaled up substantially over the next decade with 5GSA. This could result in up to £26bn in additional economic value being generated by 2035.

5GSA could unlock an added £9.5bn for the UK's broadcast, digital advertising and consumer media sectors by 2035.

5GSA has been estimated to provide significant savings in production spend on live broadcast content. By scaling up deployment of 5GSA, these savings can be realised for a larger volume of live events. This could save the sector around £1.6bn through to 2035. A further £7.9bn in value could be added based on PwC's previous estimates in consumer media growth through the expansion of 5GSA.

2. Improvements to road and rail coverage

Improving road and rail coverage could drive the greatest increase in our international competitiveness. Addressing these issues would also help to address specific issues consumers face when using the rail and road networks.

Investing to improve rail coverage to 80% could result in £12bn in additional productivity by 2035

Poor rail connectivity can be a significant barrier to productivity. Assembly have modelled the potential productivity benefits which could be delivered if coverage was to improve to c.80%, which would cover the most congested rail routes across the UK. Based on conservative estimates of the number of productive hours which could be delivered through this, they have modelled a £12bn boost to productivity through to 2035.

Belfast Harbour

Having access to a private mobile network with unparalleled coverage and capacity enabled Belfast Harbour to achieve its ambition of becoming one of the world's leading regional smart ports. BT's network enabled the port to increase its use of AI, IoT, and connected vehicles, helping to drive operational efficiencies across transport, logistics, supply chain and shipping, as well as boost productivity through the smooth-running of its operations. Every year more than 1.75 million people and over half a million freight vehicles arrive and depart through Belfast Harbour, while 24 million tonnes of goods are managed and carried by ferries, container ships and cargo vessels.



The UK economy could lose out on £45bn without investment to reach 100% road connectivity by 2035

Assembly's modelling has shown that there are a range of benefits which could be delivered if connectivity on the road network was sufficient to underpin consumer and private hire autonomous vehicles. There are clearly a number of other barriers which also need to be addressed before autonomous vehicles are available for mass use, but the benefits could be significant. There would also be costs associated with increased vehicle usage, but even factoring these in could result in a £45bn opportunity for the UK.

Previous research by Assembly has suggested that the use of 5G standalone for digitised traffic controls would reduce carbon emissions by 3.7 megatonnes by 2035 ¹⁴, equating to taking almost 100,000 double decker buses off of UK roads. ¹⁵ Combining direct and indirect effects, improved connectivity could save up to 27.8 megatonnes of transport related carbon emissions by 2035, equating to taking more than 750,000 lorries off of UK roads. ¹⁶

London Underground

EE has been working with Transport for London (TfL) and Boldyn Networks to deliver fast and reliable mobile connectivity to the entire London Underground network. As part of the collaboration, 4G and 5G coverage went live on the entire Elizabeth Line in December 2024. With more than 220 million passenger journeys made on the Elizabeth Line every year, EE's network has directly enabled more than 28 million hours of internet connectivity for workers and commuters travelling throughout London - boosting productivity for businesses of all sizes.

3. Improvements to overall network resilience

With investment to increase mobile back-up adoption by 100%, the UK could recover £7.8bn in productivity lost to connectivity failures

Despite improvements to the resilience of the fixed broadband network, there will still be times when the network suffers from outages. Mobile back up solutions can provide alternative connectivity options for businesses in these instances. If a more reliable mobile network was available, increased use of mobile backup options could become more attractive for some businesses. Doubling the take up of these options would result in recovery of c.£7.8bn in productivity as a result of reduced down time.

With investment to improve connectivity to enable the adoption of smart electricity grid technology, the UK could gain £37bn in economic benefit by 2035

Transitioning to a smart grid will unlock a number of benefits, and is a critical component of reaching the UK's climate targets. Gemserv has estimated that a smart grid could offer c.£7bn in annual benefits through reduced outages, reduced power demands and reduced maintenance costs. ¹⁷ Assembly

£45bn
Improved network resilience

has modelled that a further £37bn in benefits could be unlocked through to 2035 through the use of 5GSA.

¹⁴ <u>5G in Transport and Logistics Operations</u>, UKTIN, Accessed 2025

¹⁵ Connectivity enabled carbon reduction in transport, Assembly, 2021

¹⁶ Connectivity enabled carbon reduction in transport, Assembly, 2021

¹⁷ Economic rationale for enabling Smart Grid functionality of the UK energy system via a Private Radio Frequency-based enhanced Operational Communications Solution, Gemserv, 2021

4. Improvements to network capacity in lower traffic areas Investing in improved 4G and 5GSA coverage could add as much as £3bn into the UK's rural economy by 2035

Geographic coverage can be a particular challenge in rural communities where population density is low. McKinsey has previously modelled that the farming and tourism sectors could generate a number of benefits through the use of digitally connected technologies. ¹⁸ Assembly has estimated that the introduction of 5GSA could unlock a further £3bn in benefits above this baseline.

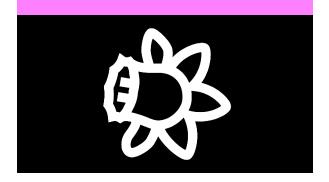
5. Wider societal benefits

There will likely also be a range of social benefits and other positive externalities which improved mobile networks could deliver.

While this report has not sought to quantify these benefits, existing research has suggested that, for example, in the NHS, mobile screening and remote diagnosis powered by mobile connectivity saved on average 33 hours of clinic time per month and freed up an additional 215 hours of screening time for the community. ¹⁹ Other studies have shown that the deployment of 5G services in a number of NHS facilities enabled mobile and remote observation through IoT sensing which freed up clinical staff time equal to £11,000 annually per clinician. 20 In the social care sector, mobile-connected technologies can allow people to live independently for longer, saving local councils £648 a week on average in residential care costs. 21 Research has suggested that wider benefits within education include that improved 5G connectivity can enable schools, colleges and universities to provide innovative teaching solutions such as immersive VR and AR programmes. 5G and edge computing can be utilised to enable student's engagement with virtual spaces in 360° VR. 22

£3.1bn

Improved rural capacity and coverage



Rural connectivity

Fishing is a vitally important industry for Scotland's rural and coastal communities, feeding into the wider economy and providing employment opportunities for local people. Iain MacAskill runs a commercial fishing business on the Isle of Skye and, following mobile network upgrades by EE, has been able to liaise with shellfish buyers across Europe while out at sea and reduce operational downtime for his vessel - providing growth opportunities for his business and maximising profitability. A <u>research report from Farrpoint</u> found that improvements in mobile connectivity in lain's rural community in Mallaig can boost the local economy by £1,054,000 over 15 years.

¹⁸ Agriculture's connected future: How technology can yield new growth, McKinsey, 2020

¹⁹ Future Connectivity wireless trialist case studies, NHS England, 2025

²⁰ Future Connectivity wireless trialist case studies, NHS England, 2025

²¹ Connected Care: How mobile connectivity can help councils overcome the challenges of delivering adult social care, Mobile UK, 2022

²² <u>5G Lectures</u>, GSMA, 2022

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