

**DIGITAL REVOLUTION** 

# BUILDING THE UK'S DIGITAL INFRASTRUCTURE







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## **FOREWORD**



**Baroness Martha Lane** Fox CBE President,, British Chambers

of Commerce

The pace of digital change isn't slowing down — it's accelerating. Al, data, automation — these aren't future trends, they're today's reality. And businesses sit right at the heart of that transformation.

But if we want to build the digitally inclusive country we all talk about, we have to get the basics right. You can't build a new house on shaky ground.

Al has the power to save time, boost productivity and turbocharge growth. Yet too many businesses are still battling with patchy broadband and unreliable mobile coverage. It's 2025 — no one should have to run a company on a buffering connection. That's not just annoying; it's a brake on growth.

Getting the fundamentals right isn't a "nice to have" — it's worth £230 billion to the UK economy by 2035. That's the scale of the prize if we deliver a resilient, nationwide, high-capacity digital network. Government must be laser-focused on unlocking that potential so every community, every business, every citizen can benefit.

And as we lean ever more heavily on data centres, we can't ignore the basics there either. Energy, land use, security — these are not side issues. A joined-up plan for data infrastructure will future proof both our economy and our digital sovereignty.

UK businesses are ready to lead this transformation. With reliable, resilient digital infrastructure beneath us, the growth possibilities are limitless. We just need to get the foundations right — and then build, fast.

# **EXECUTIVE SUMMARY**

The digital revolution presents huge opportunities for businesses across the whole of the UK. Advanced technology, such as AI, can save businesses time, making them more productive and supporting them to grow.

Connectivity is an essential part of this. However, businesses across the UK feel that they do not have the consistent and reliable connectivity they need to meet their day-to-day needs. Businesses in rural areas feel that they are at a disadvantage to businesses in urban areas, concerned that they will be left behind if there continues to be a rural-urban divide in relation to connectivity. Mobile connectivity is also a challenge, with the network under strain from demand. This hinders growth. If businesses do not have the connectivity they need, they risk losing out on opportunities to grow.

The rise of data centres will support investment and create jobs in the UK in providing the data storage that is needed to support innovation and the rise of Al. Their importance will only increase in the coming years, and the UK government must ensure that data centres are resilient to the ever-evolving threats facing UK infrastructure, including cyber, as well as severe weather events. Supporting the sustainable use of resources, such as energy and water, will be key, given the increasing demand for energy and water to facilitate data centres.

The UK's digital infrastructure must be fit for the future, as businesses progress even faster towards digitalisation. The UK government must ensure a long-term approach to improving quality, boosting resilience, and promoting sustainability in the long-term.



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## CONNECTIVITY

Ensuring that all businesses, in every part of the UK, have access to consistent, reliable connectivity is critical for economic growth. As firms have become more digitalised in some way over the past decade, reliable broadband and mobile data is now a business essential, not a luxury. From sales and marketing to relationship management and HR, digital connectivity is now embedded in every workplace to some extent.

BCC fully supports businesses' efforts to move to digitalise more of their operations as key to driving productivity and growth. As an organisation representing businesses of all sizes and all sectors, we see that it is important that all businesses are brought along the digital adoption journey. The BCC welcomes the government's commitment to supporting businesses to adopt advanced technologies, including AI. This includes through the SME Digital Adoption Taskforce, as well as the government's commitment of £2 billion in the Comprehensive Spending Review to implement key ambitions as set out in the AI Opportunities Action Plani.

Al presents huge opportunities for the UK economy from businesses to public services. Over the last three years, the BCC has been tracking businesses' uptake of Al. Our 2025 research shows that more businesses are now using Al, and fewer firms say they have no plans to adopt it. Only 33% of businesses have no plans to use Al, down from 43% in 2024, and over a third of businesses are now actively using Al, up from 25% last year<sup>ii</sup>. While this is welcome progress, BCC is concerned that without reliable connectivity, businesses will be unable to fully capitalise on the opportunity that Al presents to the UK economy.

BCC has heard repeated concerns from businesses across the whole of the UK, particularly in rural areas, that they still do not have the connectivity they need to meet their day-to-day needs. Addressing these concerns is critical to ensuring that rural businesses are not left behind as more businesses accelerate digitalisation.

This is critical for growth. Businesses must have access to reliable connectivity in order to grow. Insufficient connectivity risks holding back businesses.

## **Broadband**

Research carried out by the BCC's Insights Unit has shown that businesses are still facing challenges with reliable broadband connectivity. This research, carried out in 2023, found that only 56% of SMEs in rural areas agreed that their area had. reliable broadband, compared to 82% in urban areas<sup>iii</sup>. There is a clear rural-urban divide among businesses around digital connectivity, which risks hindering economic growth. Recent engagement with businesses across our Chamber Network strongly suggests that little has changed since our latest polling.

56%

of SMEs in rural areas agreed that their area had reliable broadband

82%

of SMEs in urban areas agreed that their area had reliable broadband

Ministers have announced additional support for broadband in recent years, with a particular focus on "hard to reach homes and businesses". In 2021, Project Gigabit was launched, with £5 billion of government funding to boost growth and support the recovery from the Covid-19 pandemic. At the time, the UK was expected to be on track for one of the fastest rollouts of gigabit broadband in Europeiv.

However, businesses are concerned that this ambition may not become a reality.

The BCC welcomes the announcement of £1.9 billion in the government's Comprehensive Spending Review for Building Digital UK (BDUK). This will support connecting more homes and businesses to gigabit-capable broadband to reach 99% of UK

premises by 2032<sup>v</sup>. While noting that this target is a change from the original commitment of reaching full broadband coverage by 2030, the BCC urges the government to ensure that BDUK has the funding it needs to ensure new targets can be met. A failure to provide certainty on future funding risks resulting in infrastructure providers standing down supply chains, delaying businesses' access to faster broadband.

Funding is only part of the story. Project Gigabit must be targeted properly to reduce the disparity between rural and urban businesses on broadband. This will help ensure all businesses are digitally connected, no matter where they are in the UK.

The BCC also calls on the government to address barriers to building digital networks. The industry's inability to upgrade tenants or leaseholders in multidwelling units risks creating a new digital divide in the UK, with an estimated one million premises missing out.

The government must also deliver a more flexible permitting process. With a focus on hard-toreach premises, any measure that can speed up deployment should be delivered as a priority.

## **Mobile Connectivity**

In addition to broadband, it is essential that businesses have consistent access to mobile coverage. Many firms regularly operate on the move and businesses tell us that a lack of good mobile coverage is a major barrier to growth. Businesses are having to plan on the assumption of unreliable or no mobile connection when on the move.

The government has taken steps to address challenges with rural connectivity through the Shared Rural Network which was set up to improve mobile coverage in the UK. Funded by the government and the mobile network operators, it set an objective of delivering 4G coverage to 95% of the UK by December 2025vi. This target has already been met ahead of time, demonstrating commendable progress in extending UK coveragevii.

The government must continue to identify barriers to the expansion of 4G and 5G mobile coverage across the UK to ensure that as many parts of the UK as possible will have access to the best quality

mobile coverage possible, with a clear strategy for those areas that continue to have unreliable coverage.

While particularly prominent in rural areas, the BCC is concerned that cases of "not-spots"—areas where connection to the internet is poor—is far from limited to rural areas. There has been significant media coverage of "not-spots" in urban areas, including London, highlighting examples of areas of the city having connections below 30Mb/s (megabits per second)viii. This demonstrates that the issue of insufficient mobile coverage is a nationwide challenge.

At an international level, the quality of 5G mobile coverage in London is behind that of other European cities. According to research from MedUX, London falls behind cities such as Paris, Berlin, and Milan in terms of 5G quality and reliability. Industry experts have highlighted that the challenge around 5G is centred around network capacity and difficulties with building phone masts in London, where planning laws vary between London boroughsix.

There are currently four different 'generations' of mobile technology: 2G, 3G, 4G, and 5G. According to Ofcom, all mobile network operators in the UK have confirmed that they will switch off 2G by 2033, and 3G has already been switched off in most cases<sup>x</sup>.

But the switch off process is not without concerns. The BCC has heard that 2G technology is still in active use for a range of services that are key to businesses. This includes tracking services, telecare systems, and vehicle parking services. As 2G is phased out, Mobile UK has warned that there is a risk of some disruption to operations because of some suppliers not having a direct relationship with mobile network operators, and businesses could be inadvertently affected.

It is vital that businesses review their existing arrangements with suppliers for services that rely on mobile connectivity to identify which may still be dependent on 2G technology. This is critical to ensuring a smooth transition as 2G is gradually switched off.

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## **DATA CENTRES**

The BCC welcomes the government's commitment to accelerate the building of data centres across the UK. They are vital for storing and supporting the technology needed to meet the growing demands of business and wider society. The government has rightfully recognised that data centres "underpin almost all economic activity and innovation, including the development of AI and other technology, public service delivery, and how we interact with one anotherxi."

# **5000 Jobs**

created in the region from the creation of the Al Growth Zone

# £30bn

of investment in the region expected from the creation of the Al Growth Zone

Ministers recently set out plans to establish AI Growth Zones to facilitate the accelerated build out of AI data centres. These zones will unlock vital digital investment with improved power and planning supportxii. In September 2025, the government announced the creation of an AI Growth Zone in the North East of England, which is expected to create around 5,000 jobs and bring in £30 billion of investment in the regionxiii. This was welcomed by business members of the North East Chamber of Commerce.

The BCC believes that its extensive network of over 50 Chambers of Commerce in the UK can play a key role in supporting the expansion of AI Growth Zones. Chambers of Commerce understand their local area, as well as business needs and challenges, making them well-placed to support the appropriate expansion of data centres.

Through engagement with its network, BCC has been alerted to concerns relating to data centres. In particular, these centre around resilience, use of resources, the need to ensure that data centres are protected against threats, and that there are sufficient resources to power their use.

## Resilience

As data centres become a key part of our economic infrastructure, it is crucial that they are resilient in the face of a wide range of evolving threats to the UK. This includes cyber threats and increasing risk of damage from severe weather events linked to climate change, as well as the need to ensure the continuation of business operations.

The BCC welcomed that ministers designated data centres as Critical National Infrastructure (CNI) in September 2024. This decision gives the sector greater government support in monitoring potential threats, responding to critical incidents, and minimising any damage caused<sup>xiv</sup>. In the light of significant cyber attacks across the UK, with direct impacts on businesses, supply chains and public services, it is vital there is as much protection for data centres as possible. Enabling the continuous running of data centres and the minimisation of any damage caused by an outage must be a top priority for government. This should form a central part of a new long-term strategy to address the growing threats facing digital infrastructure in the UK.

## **Use of Resources**

Powering the significant expansion of data centres in the coming years and decades will require huge amounts of energy and water. Data centres make up a notable proportion of the UK's total energy usage. The National Grid predicted in 2024 that power to support the surge in data centres due to AI and quantum computing would increase six-fold in 10 years<sup>xv</sup>.

In its 2025 report, Powering the Cloud, Energy UK argued that the need for significant resources to fuel data centres "highlights the need to think more strategically about how infrastructure investment is coordinated, planned and delivered." The BCC supports Energy UK's recommendation that the government and National Energy System Operator should work alongside industry and the AI Energy Council to "establish clarity over the optimal locations and likely energy impacts of additional data centre investment in the UKxvi."

The BCC urges the government to explore opportunities to support data centres in the UK which have been designed to maximise energy efficiency and minimise environmental impact. This includes green data centres, which are powered, at least in part, by renewable energyxvii.

More widely, there are examples of heat generated from data centres across Europe being used to warm homes, preventing the unnecessary loss of heat. The previous UK government announced public funding in 2023 towards green heating projects, including The Old Oak and Park Royal Development Corporation in Londonxviii. The government should ensure the increase in data centres is aligned with other government priorities, particularly on net zero and environmental sustainability.

This could also include ensuring that data centre planning is aligned with heat network zoning to maximise opportunities for waste offtake and water cooling.



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# **CONCLUSION AND RECOMMENDATIONS**

Delivering a resilient, reliable, and high-quality digital infrastructure is a critical component to growth for businesses. Without it, businesses in the UK will lose out on opportunities to grow and digitalise their services, as well as support growth at a national and local level through creating jobs and boosting investment.

This report has analysed some of the most fundamental barriers businesses face with connectivity which, if left unaddressed, will prevent businesses from being able to benefit from the rapid development of AI. Data centres also offer a significant opportunity for growth, but the Government must ensure a joined-up approach to their acceleration. This includes ensuring that this aligns with securing connections, supporting sustainable use of resources to power them, as well as the protections they have in place for continuity of service.

There is a significant growth opportunity for businesses if they have the digital infrastructure they need. A clear, joined-up, and long-term approach from the Government can help deliver this.



#### **OVERALL**

1. The government should provide an assessment of the threats facing the provision of broadband, mobile coverage, and data centres in the UK, and the likely impact on businesses. This should consider ways to ensure that the impacts of outages caused by cyber attacks and severe weather events can be minimised.

#### CONNECTIVITY

- 2. The government should confirm the longterm funding arrangements to ensure full gigabit coverage for the UK through to its updated target of 2032. It should also set out how it will measure progress towards the 2032 target.
- 3. The government should take steps to address barriers to digital infrastructure and the persistent geographical disparities in the rollout of gigabit broadband, ensuring that businesses in rural areas and those starting and scaling businesses remotely are not put at an unfair disadvantage.
- 4. The government should provide an assessment on the state of the UK's mobile connectivity, including identifying ways to provide consistent, reliable mobile coverage across all areas of the UK. This should also include clear, achievable targets to ensuring that reliability of mobile coverage continues to improve across the UK.
- 5. The government should identify areas where mobile network capacity is under significant strain, setting out a strategy to address capacity challenges, providing government support for developing innovative solutions to mobile connectivity which can meet growing demand.

#### **DATA CENTRES**

- 6. The government should ensure there is a coherent approach to measuring the consumption of water and energy by data centres. This should include consistent and comparable methods to record consumption by data centres, as well as how the government expects demand and usage to increase, and how this demand will be met. The government should work with NISTA (the National Infrastructure and Service Transformation Authority) to ensure a joined-up approach in relation to use of land, energy, and water with data centres.
- 7. The government should explore options to support green heating projects (such as district heating) through data centres in the UK, including opportunities to heat properties across the UK and reducing unnecessary waste of heat, where possible.
- 8. The government should provide clarity around data centres getting connected to the grid, including how data centres are linked to the recently-announced **Connections Accelerator Service, to ensure** timely grid connections.

## **APPENDIX**

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