



Supercharging Small Businesses

A WPI Strategy report for Vodafone UK

March 2024

Contents

Foreword	02
Executive summary	03
Chapter 1: The SME Landscape	04
Chapter 2: International Comparison	06
Chapter 3: Domestic Productivity	10
Conclusion	15
Endnotes	16

Disclaimer & Legal

This report has been produced by WPI Strategy and Vodafone. The views expressed in the report are based on independent research and represent solely the views of the authors. They are provided for informative purposes only. Whilst we undertake every effort to ensure that the information within this document is accurate and up to date, Neither WPI Strategy nor Vodafone accept any liability for direct, implied, statutory, and/or consequential loss arising from the use of this document or its contents.

About WPI Strategy

WPI Strategy is one of the UK's leading political communications consultancies, with a track record of delivering high impact public affairs campaigns. We offer senior strategic counsel to ensure that campaigns are underpinned by evidence-based content.

 wpi-strategy.com

 nick@wpi-strategy.com

 [@wpi_strategy](https://twitter.com/wpi_strategy)

About Vodafone

Vodafone UK is a technology communications company that connects people, businesses and devices to help our customers benefit from digital innovation. Our services span mobile, fixed-line connections, home and office broadband, and the Internet of Things (IoT).

We have a strong track record as a tech pioneer, making the UK's first mobile phone call, sending the first text message, and making the UK's first live holographic call using 5G in 2018. We were also the first to start carrying live 5G traffic from a site in Salford, Greater Manchester. As of March 2022, we have 5G in 380 locations across Europe – 141 in the UK and 239 across Germany, Spain, Italy and Ireland. Our 4G network coverage currently reaches over 99% of the UK population.

Today, Vodafone serves more than 18 million mobile and fixed-line customers in the UK. To help deliver Gigabit UK, our full-fibre roll-out programme now covers 26 UK towns and cities, rising to 35 over the coming months, through partnerships with CityFibre and Openreach.

We're working to cut carbon emissions from our UK operations to net zero by 2027. We're investing millions into energy-efficient equipment; powering our network, offices and stores with 100% renewable electricity; and ensuring our fleet vehicles are all electric. We're also working with our suppliers to significantly reduce their emissions. By 2040, Vodafone will be net zero across its full carbon footprint globally.

We are part of Vodafone Group, one of the world's largest telecommunications companies, with mobile operations in 21 countries, partnerships with mobile networks in 42 more, and fixed broadband operations in 17 markets. As of 30 June 2020, Vodafone Group had approximately 300+ million mobile customers, 27 million fixed broadband customers and 22 million TV customers, including all of the customers in Vodafone's joint ventures and associates.

For more information about Vodafone UK, please visit: www.vodafone.co.uk

Foreword

Small and medium-sized enterprises (SMEs) make up much of the UK's economic output. Over 99 percent of registered businesses in the UK are classified as SMEs, together employing almost two-thirds of all private sector workers.

Put another way, for many people in the UK, their daily working life is not one of large corporations and even larger skyscrapers. Rather, it is one of start-ups and scale-ups, of entrepreneurs and the self-employed who are committed to growing their businesses in order to produce more, do more, and generate more value for their local communities as well as the national economy.

In an increasingly globalised world, SMEs are not just competing against other businesses in the UK, but in many cases against their counterparts across Europe and beyond. In order to compete successfully in the modern era, we believe digital connectivity to be just as important to small businesses as other vital tools such as skills and staffing. Small businesses also serve as vital cornerstones of their communities, being more likely to employ from and reinvest their profits into the local area.

That is why we welcome the publication of this new research, which seeks to understand both the domestic SME landscape and the UK's position in relation to its international rivals.

Politicians of all parties have rightly set out their ambitions to make the UK the best place in Europe to start and scale a business. On this front there have been notable successes, with the UK boasting the largest tech sector in Europe valued at nearly £800 billion and being home to approximately one-third of all so-called tech unicorns. Meanwhile strong collaborations across the tech sector, such as our Tech Hub – supported by Vodafone – are playing their part to help start-ups reach their potential.

What this research has found, however, is a more nuanced picture for many of the UK's small businesses. Whilst the UK is undoubtedly one of the best places to start a new business, it risks being outpaced by European rivals that are investing in reliable, superfast connectivity at a faster rate than we are, whereas delivering standalone 5G would result in potential productivity savings for SMEs of £8.6 billion per year.

The research has also shown that an accelerated rollout of standalone 5G across the whole country has the opportunity to take the UK from 5th place on our connectivity ranking to 2nd best in Europe, meaning better and more reliable connectivity for small businesses across the UK. We need standalone 5G available to all small businesses whether they are based in a town, city or the countryside to enable them to drive the growth the country desperately needs. To make this possible, Government needs to create the right conditions: whether market, policy or regulatory, to ensure that this investment takes place as fast as possible.

Emma Jones
CEO of Enterprise Nation



Executive summary

- We have created a unique index that ranks the progress of European countries on their connectivity and digital competitiveness levels. SMEs need a high level of both to grow. This is based on a new model which determines scores across a country's 5G coverage, SME adoption of 5G enabled technology and 5G upload and download speeds, to create a comprehensive ranking.
- Based on current progress rates, and without further action, by 2030 the UK would rank **5th** on this index, scoring lower than Denmark, Finland, Sweden and the Netherlands. The UK would lose its position as one of the foremost places in Europe to start a new business.
- But an accelerated rollout of standalone 5G (5GSA) would allow the UK to jump three places from its current position by 2030, becoming the **second-best place in Europe for business to secure the connectivity and digital competitiveness needed to grow**.
- The results also show that the UK's SMEs are truly Europe-leading in terms of their digital enablement and adoption of new technologies - but are being let down by a poor investment environment for network connectivity.
- Given the UK's strong track record on digital uptake it is crucial that Britain continues to capitalise on emerging innovations, to keep up with the recent development in sectors such as AI which are shaping the global economy - seizing the initiative to deliver reliable and fast 5G infrastructure is now more essential than ever.
- Furthermore, standalone 5G has the potential to result in over **£8.6 billion** of productivity savings for UK SMEs per year.
- These annual savings can be broken down by sector and by region:
 - Sectors with significant productivity gains for SMEs include wholesale and retail stores (**£1.84 billion**); science, technology and professional services (**£1.67 billion**); construction (**£1.28 billion**); and manufacturing (**£854 million**).
 - Every region and nation across the whole UK stands to benefit from the rollout of standalone 5G, with London (**£1.55 billion**) and the South East (**£1.22 billion**) as well as the North West (**£909 million**) and East of England (**£842 million**) performing particularly well.

What is standalone 5G?

Standalone 5G (5GSA) refers to the rollout of 5G connectivity on an entirely new network, as opposed to building upon the existing 4G network. Whilst this enables the network to enjoy some of the benefits of superfast connectivity, 5GSA is not subject to the limitations of the 4G networks, and is therefore able to support high-density deployments, such as smart sensors and real time data sharing.

Chapter One: The SME Landscape

The UK is currently one of the best places in Europe to start and scale up a small business, however we risk being overtaken by competitors if we do not improve our digital infrastructure through the acceleration of standalone 5G (5GSA) mobile connectivity.

SMEs represent over 99% of all UK businesses and employ almost two-thirds of the private sector workforce, equivalent to 48% of the UK population.¹ Digital transformation has changed the way SMEs do business in every sector across Britain: from the e-commerce revolution in retail, to the digitisation of healthcare systems, to the increases in remote working. The pandemic was a turning point for digital adoption, with 60% of SMEs intensifying their use of digital technologies due to COVID-19.² These transformations present opportunities for productivity and growth. Research by the ONS finds that firms who adopt multiple business organisation technologies can increase productivity by 25%.³

Yet, despite these developments, small businesses in the UK are the least optimistic about their future compared to medium and large businesses. Analysis by Mastercard and Opinium found that less than a quarter (23.9%) of small businesses expect their performance to increase in the period to July 2024.⁴ Higher interest rates, spiralling energy costs, and rising wages, have made it difficult for businesses to rebound since the pandemic and energy crises. It is critical, therefore, that resource-constrained SMEs are supported in keeping pace with digital change to remain competitive.

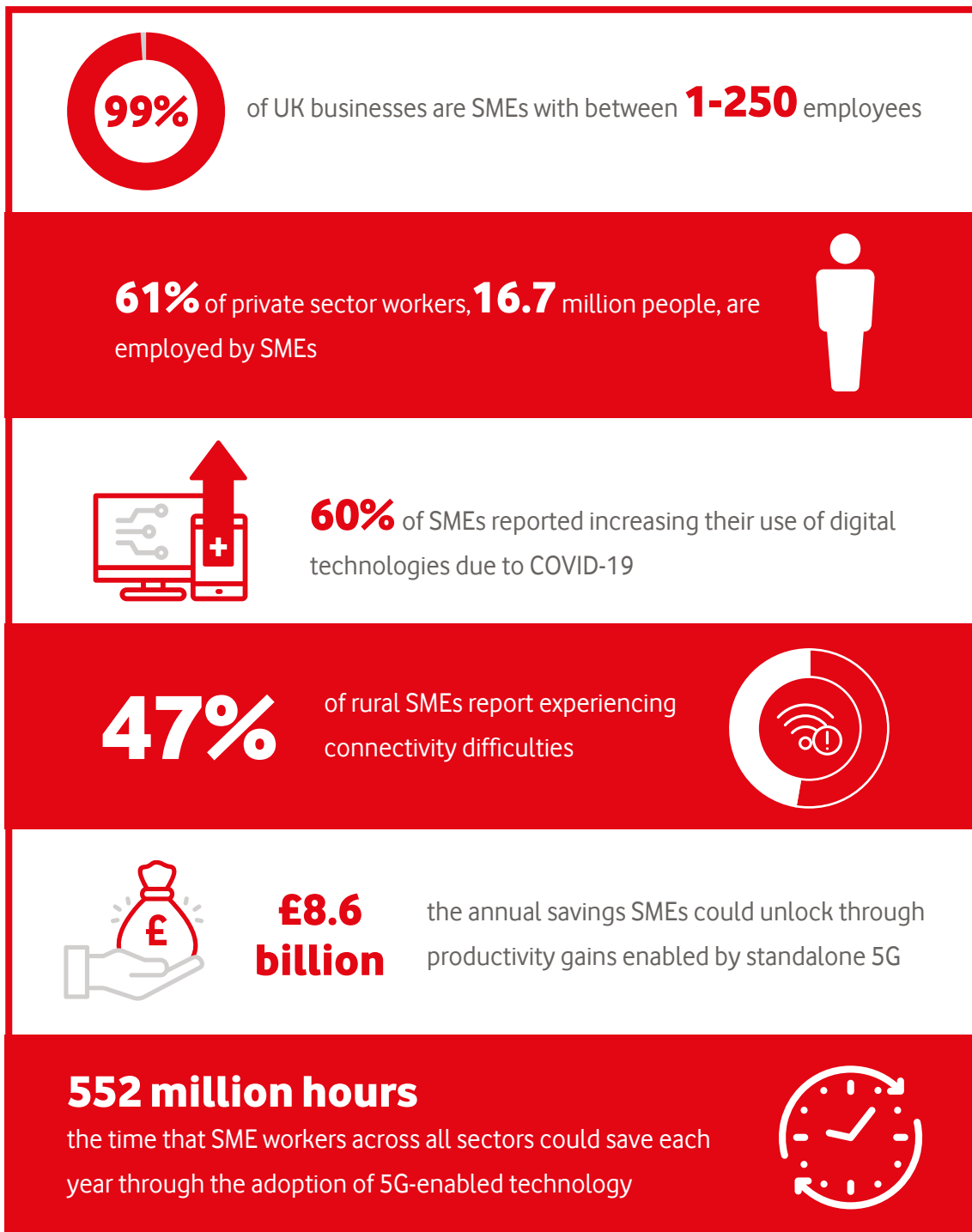
We know, for instance, that supporting SMEs has knock-on effects for UK growth, employment, and innovation. Small businesses are key to empowering communities, through job creation and local investment. Spending just £10 in a small business can result in £50 more being recirculated in their community, as smaller employers are more likely to spend their earnings in the local area.⁵ These ripple effects extend beyond growth, to addressing the UK's skills shortages. SMEs are the backbone of our apprenticeship system, providing 108,000 opportunities in 2022/3 alone.⁶ It is clear that these businesses have a social and financial status that we must look to elevate.

Programmes like the Government's Project Gigabit, which aims to connect everyone in the UK to full fibre or gigabit capable broadband by 2025, offer a step forward when it comes to digital adoption. This, combined with sustainable private investment in next generation standalone 5G networks, takes the UK to the next level. However, the UK's digital infrastructure lags behind G7 countries in relation to mobile network connectivity. According to OpenSignal, the UK ranks last among G7 countries for average 5G download speeds.⁷ Access to mobile connectivity is also not shared widely enough. Research by the FSB shows that nearly half (47%) of small businesses in rural areas experience unreliable data connectivity, whilst our previous research has found that over half of deprived rural areas have no 5G connectivity compared to just 2.7% of deprived urban areas.^{8,9}

Our research also found that UK SMEs are already among the most digitally enabled in Europe. This is encouraging and goes some way towards explaining why the UK currently performs so well in our index, ranking at 5th out of the 17 countries we studied under a business as usual scenario.

The good news, then, is that many SMEs have already put in the hard work required to supercharge their businesses. Now, the challenge is to maintain this leading position and continue to improve – 5G is a crucial part of this process. It is therefore time for the Government and the telecommunications sector to do its part and deliver a standalone 5G network that enables UK SMEs to reach their full potential.

Figure 1: SMEs by numbers



Chapter Two: International Comparison

Background

In addition to hosting a rich and broad variety of SMEs, the UK is rightly recognised for its hard won status as one of the most attractive digital destinations in the world, and stands as a leader in technological development from AI to life sciences.¹⁰ This strong position is not only characterised by the presence of cutting edge sectors, but by a historically high level of technical adoption from large firms to SMEs.¹¹ As the economy continues to become increasingly digital, increasingly innovative, and increasingly online, Britain is well placed to go further, and extend its competitive advantage internationally.

To truly unlock transformative opportunities for all businesses, however, strong technological adoption and rising levels of digital literacy must be complemented by a network which can facilitate growth and productivity savings across the whole country - providing the right infrastructure to maximise the UK's potential.

Whilst connectivity is an essential building block upon which all firms rely, for small and medium sized businesses the quality of digital networks can offer crucial opportunities to grow, innovate and adapt. For SMEs with tighter margins, or those in rural areas that face higher barriers to connectivity than their larger counterparts, this can be the vital factor between success and failure.¹²

Across Europe, businesses and policymakers are becoming further attuned to the digital foundations which increasingly underpin economic growth. Initiatives such as the European Union's 2030 Digital Compass,¹³ France's Plan de Transformation numérique,¹⁴ and Germany's Digital Strategy 2025¹⁵ rival the UK's Wireless Infrastructure Strategy, and are representative of the fact that digital infrastructure will provide the central bedrock for much future growth potential in Europe.

Moreover, whilst this study has chosen to focus on our nearest geographical competitors, it is important to note that global players such as China and South Korea have set an exemplary standard and are therefore pulling even further ahead on global league tables.^{16,17}

When coupled with the current pace of technological change and the emergence of AI, the present period represents a crucial window in which the quality of digital infrastructure can create critical competitive advantages within the global economy. The UK has to date been a digital leader - this would be a disastrous time to fall behind.



How South Korea sets the standards for a 5G national network

South Korea is at the international forefront of new, cutting-edge technologies and is home to some of the most innovative tech companies. In April 2019, it also became the first country to launch commercial 5G networks to customers and is on track to become the first country to achieve a truly nationwide 5G network. Samsung was the first company to launch a 5G smartphone, the Galaxy S10. The state-of-the-art 'K-City' is a unique autonomous driving city, where cars can communicate with each other over a 5G network.

Given these world-leading innovations and the strong relationship South Koreans have with the latest consumer technology, it is unsurprising that South Korea consistently tops the international rankings for 5G, both in terms of its geographic availability and the network speeds it offers. According to recent tests by Speedcheck, which uses consumer data to rank countries based on their 5G speeds, South Korea users have on average a download speed of around 435 Megabits per second (Mbps) – and top download speeds can reach an impressive 885 Mbps – close to a Gigabit per second. This means that the network can download a 4K movie in a matter of seconds and withstand constant real-time data collection.

Under the country's 5G+ Strategy, its government has offered tax breaks and investment of over \$27 billion, with support to target a wide mix of industries – including SMEs. Part of this funding has allowed for 5G access across all major subway lines on the Seoul Metro. There are more than 150,000 5G base stations in operation nationally, providing a balanced availability of 5G.

Businesses in South Korea, both large and small, have greatly benefitted from the country's extensive network coverage, providing an unrivalled foundation to grow and scale by utilising the latest technologies and ensuring that there are no barriers to innovation.

South Korea has a tradition of focusing on digitalisation; the government's Digital New Deal created a \$48 billion pot to digitalise public services and infrastructure.

But South Korea also has three major market players – SK Telecom, KT and LG Uplus – that worked with the government to provide a responsible and dedicated expansion of its 5G networks under a strong institutional arrangement, creating a focused commercialisation plan with providers that set ambitious rollout targets.

Methodology for creating the European Index

In recognition of the importance of digital competitiveness and the quality of a connectivity network to the growth potential of SMEs, Vodafone UK commissioned WPI Strategy to undertake new research to chart the UK's position against a number of European rivals including France, Germany and Denmark.

To do this, we have created a European index that compares and ranks the competitiveness of each country's 5G offerings for SMEs across 17 countries. Each country is scored out of 100 based on the three weighted criteria informed by the most important factors for SMEs in this space: **5G geographical coverage**, **SMEs' digitalisation**¹⁸ (the number of SMEs that actually use the technology which can benefit from 5G networks, as well as an indicator of digital skills), and **5G speeds**.¹⁹

Against this backdrop we have modelled two different future scenarios for the UK:

1. Business As Usual: rollout continues at current speeds.

- While there are some improvements in connectivity, including 5G, the Government misses its target of national coverage for standalone 5G by 2030.²⁰
- Without the UK having significant 5GSA coverage 5G download and upload speeds therefore remain slower than in other European countries.

2. Merger-level Progress: Vodafone UK and Three make the £11 billion of additional investment pledged, should the proposed merger go ahead.

- The UK meets its target of national coverage for standalone 5G by 2030, in large part due to the merger of Vodafone and Three resulting in their investment to reach 95% of the population with standalone 5G.
- The rollout of 5G standalone at scale makes 5G availability and speeds for UK SMEs Europe-leading, vastly improving the overall 5G quality and average speeds.

Results – How the UK can be Europe-leading

Under the Business as Usual scenario, at current 5G rollout rates the UK would rank 5th out of 17 countries in our composite index by 2030. With a Europe-leading SME digitalisation score, our businesses are regional leaders at utilising and deploying digital skills and technology. However, in this scenario our network position prevents us from moving up the rankings to truly take advantage of the UK's impressive technological uptake to date.

Indeed, separate research confirms this - the UK places 39th out of 56 developing and advanced countries in terms of active 5G connections.²¹ Given the projected 40% per annum increase in consumer data demand,²² and the 400% uptick in data usage since 2016, it is essential that the UK improves its network, ensuring that the potential of our digitally adept SMEs is not limited.

However, if the right investment is made in standalone 5G - improving coverage and speeds - the model shows that, by 2030, the UK could jump from 5th to 2nd place - unlocking widespread productivity gains and enhancing the UK's status as a go-to SME hub.

Figure 2: The UK's relative position under the Business As Usual and Merger-level Progress scenarios.

Ranking	Country	Total	Total Index score (5G coverage)	Total Index score (SME digitalisation)	Total Index score (5G speeds)
1	Denmark	74.6	74.92	70.48	83.23
2*	UK (Merger)	73.9	70.82	75.66	80.26
2	Finland	71.1	72.23	73.92	60.97
3	Netherlands	68.4	75.00	68.88	45.41
4	Sweden	67.1	59.88	68.06	89.05
5	UK (BAU)	66.3	67.88	74.16	42.59
6	Italy	63.0	74.94	53.13	46.15
7	Austria	62.5	70.68	53.86	55.63
8	France	62.2	69.09	49.26	69.30
9	Ireland	61.0	64.31	64.77	41.36
10	Portugal	60.9	65.90	51.93	65.50
11	Germany	60.0	71.33	52.20	40.44
12	Spain	58.0	63.48	55.89	44.85
13	Croatia	57.5	56.50	50.07	78.29
14	Belgium	56.9	57.03	57.89	53.92
15	Czechia	55.7	67.25	51.22	27.69
16	Estonia	52.9	60.37	52.10	29.91
17	Poland	45.7	53.62	40.17	31.91

* = projected position by 2030 under merger-level progress scenario.

Chapter Three: Domestic Productivity

Background

An accelerated rollout of standalone 5G would not just ensure that the UK maintains and improves its status as one of the best places in Europe to start a new business, it would also mean that our existing SMEs would be able to reap the benefits of a truly world-leading 5G network through enhanced productivity.

Almost two-thirds of UK private sector workers are employed by SMEs. In order to truly solve the UK's current productivity crisis, we must utilise standalone 5G to maximise the productivity of the over 16 million workers in the SME sector.²³

Whilst start-ups and small businesses are frequently able to adapt and upskill faster than larger companies, and often find themselves leading the way in the adoption of new technologies as a result, the specific success of UK SMEs speaks to their widespread investment in technology and skills, more so than their European competitors.

It is important to ensure that these same businesses are empowered to go further and faster, and their Europe-leading technical adoption is now complemented through better connectivity. Our model below shows that this would unlock significant boosts to productivity.

Methodology for creating the productivity savings

To calculate the productivity savings enabled by standalone 5G, this study uses various ONS datasets, including the latest official government data sources on SMEs operating in the UK to determine their total number of employees and the total Gross Value Added (GVA) by region and by industry, to create an average annual productivity per worker calculation (in line with the standard statistical approach for calculating productivity).²⁴ Then, an empirical review of existing research informs the percentage of working time saved by each industry. Lastly, this is used alongside data on the average working times for each industry to calculate the total working hours saved in total and per employee.²⁵

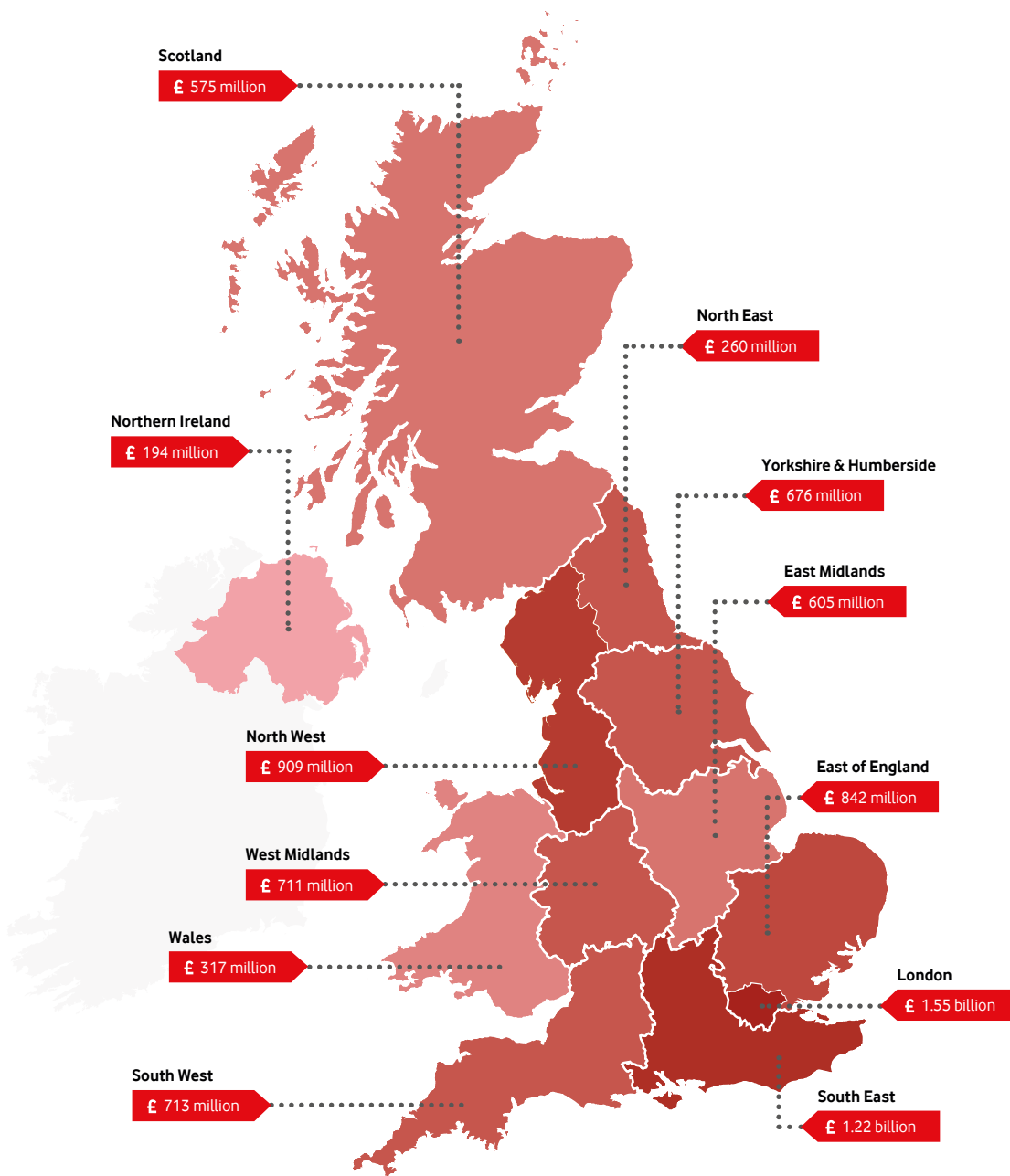
Results

Through our modelling, we judge that a full standalone 5G network in the UK will lead to £8.6 billion in productivity savings for SMEs per year - or a total of almost 552.8 million hours saved by all SME employees per year.

Access to fast and reliable standalone 5G connectivity is not just important for our international competitiveness, it is vital to ensure that SMEs are able to continue to innovate and adapt, operate more effectively and ultimately access billions in productivity savings.

To highlight this further, we have broken down the benefits by both sector and region in order to reflect as accurately as possible where productivity savings can be found.

Figure 3: Savings by region:²⁶



Sectoral Case Studies

The power of standalone 5G for SMEs can hugely benefit employees. With its low latency, superfast speed, and high capacity, standalone 5G can improve the interconnectedness of workers and technology through real time data sharing, optimising efficiency whilst alleviating pressures and disruptions on other networks.

As such, there are productivity gains to be made across almost every sector in the UK.

The summary of results shows that there are significant productivity and financial savings available in every sector. These savings can be reinvested back into SMEs looking to grow over the long-term.

Sector	Total number of workers	Working time saved by standalone 5G per employee per year	Total time saved by all employees per year (hours)	Total average working time saved per employee per year	Total productivity savings(GVA per employee)
Agriculture	296,000	6%	37,771,968	128 hours or 3.12 weeks	£112 million
Arts & Entertainment	258,000	3.5%	13,147,680	51 hours or 1.82 weeks	£118 million
Construction	1,094,000	3.5%	70,069,623	64 hours or 1.82 weeks	£1,228 million
Customer & Administrative Services	1,152,000	3.0%	53,739,880	47 hours or 1.56 weeks	£807 million
Education	214,000	1.5%	4,585,317	21 hours or 0.78 weeks	£34 million
Health & Social Care	979,000	3.0%	44,563,262	46 hours or 1.56 weeks	£280 million
Hospitality	1,428,000	1.0%	18,411,998	13 hours or 0.52 weeks	£92 million
Information & Communication	657,000	3.5%	39,391,480	60 hours or 1.82 weeks	£772 million
Manufacturing	1,298,000	2.5%	58,257,762	45 hours or 1.30 weeks	£854 million
Professional, Technical & Scientific Activities	1,375,000	5.0%	120,621,000	88 hours or 2.60 weeks	£1,677 million
Retail & Wholesale	2,002,000	1.5%	45,292,668	23 hours or 0.78 weeks	£1,848 million
Transport & Logistics	468,000	5.5%	46,931,864	100 hours or 2.86 weeks	£792 million

The savings outlined above will be made possible through standalone 5G and the new innovations it brings. This will allow SME workers to use their time as productively as possible, generating a significant boost to efficiency and output.

Examples of these technologies include:

- Real-time data monitoring:** Technologies like the Internet of Things (IoT) and real-time data sensors on a standalone 5G network can analyse sensory data collected from farms to factories. By seeing data in real time, controllers can gather the information they need and predict faults and detect irregularities faster, improve quality control, reduce wastage, prevent workplace accidents and respond to any changes in the environment to maximise production schedules and spend less time responding to problems.

- **Faster communications and working remotely:** Most of these employees work in offices or work remotely - or in today's post-pandemic world - both. Standalone 5G is therefore crucial in providing a reliable alternative network to broadband for workers to constantly communicate via instant messaging and video, collaborate in real-time on products without disruption, and work both remotely and on the move. This means that productivity does not have to be lost because of poor connectivity.
- **Resilience and reliability:** A nationwide standalone 5G network would greatly increase the resilience and reliability of services that require constant connectivity, such as payment-systems. Around 75% of all UK businesses experienced internet outages in 2023, which affected payment systems. Only 12% of these businesses had access to an alternative network to resume payments.²⁷ For SMEs where upfront payment systems are central to revenues, these outages are costly. Thankfully, reliable and accessible standalone 5G networks can prevent the crucial losses of revenue from SMEs in these instances by providing a robust alternative to payment systems when the main connection channels are down.

Case Study: Agriculture

Some of the most innovative 5G technologies are developing across the agriculture sector to help reduce waste and create more efficient food production.²⁸ With agricultural activities tending to be much more spread out than other SME business operations, this means that having a reliable 5G-supported network is especially needed to reap the productivity rewards across new and exciting technological frontiers:

- **Real-time data monitoring:** Technologies like the Internet of Things (IoT) and real-time data sensors on a standalone 5G network can capture the status of virtually everything that farmers typically spend the most time on assessing: the weather, soil quality, and crop health. By seeing data in real time, farmers can access the information they need and use technology to support decision-making for when to water crops or use pesticides - greatly reducing working hours and costs.
- **AI decision-making and forecasting:** With the wealth of uninterrupted data that can be collected on a standalone 5G network by smart technology, this enhances the information that AI can use to make more informed, faster recommendations to farmers than manually. AI programs can forecast things such as future crop health and optimised farming schedules to maximise crop yields.
- **Precision machinery:** New machine technology can also use data to determine more precise amounts of resources to use in the field for crop health, reducing wastage and saving time than if completed manually. Pioneering unmanned machinery, including for weeding and seeding, can save farmers more hours in the field to focus on other areas of the agricultural business.

Through a meta-analysis of surveys on how the 296,000 workers employed by agriculture SMEs typically spend their working times, we expect that they can save on average at least 6% of their working hours - or over 3.1 working weeks per worker - through a national standalone 5G network and the technologies it enables.

This equates to all these workers collectively saving over 37.7 million working hours per year – delivering productivity savings of £112 million per year.

Case Study: Construction

Despite new technologies emerging in the construction sector, at the SME level the industry is still predominantly labour-intensive and involves a range of stakeholders making on-site interactions, from constructors to machine operators to project managers. Large-scale construction projects often rely on patchy broadband and personal mobile networks for workers to communicate with each other. Through a standalone 5G network, all workers can benefit from a more reliable and faster information exchange system for project delivery:

- **Greater site connectivity:** Construction workers are typically spread out across physical building sites, materials bays and offices, and so rely on informal channels to communicate, mainly on mobile devices. Poor site connectivity often leads to delayed project updates and workers losing time by conveying messages and instructions physically. By having greater site connectivity through standalone 5G, these issues are removed, and it allows for a more effective and centralised exchange of information.
- **Virtual modelling:** Having access to a standalone 5G network on-site also benefits time-saving technologies, including virtual modelling and architectural programming, which require a reliable data network to update projects digitally, in turn to maximise worker and resource allocation in the event of project changes in real-time.
- **Equipment tracking:** 5G-enabled equipment tracking can provide precise locations of on-site assets that have been tagged by GPS, resulting in less time spent by workers locating equipment and preventing loss or damage.

Through a meta-analysis of surveys on how the 1,094,000 workers employed by construction SMEs typically spend their working times, we expect that they can save on average at least 3.5% of their working hours – or 1.8 working weeks per worker - through a national standalone 5G network and the technologies it enables.

This equates to all these workers collectively saving almost 70.1 million working hours per year – delivering productivity savings of £1.28 billion per year.

Conclusion

The UK is home to a broad range of SMEs who are well placed to take advantage of the next generation of mobile connectivity. They have proven that they are resilient and adaptable, digitising in response to COVID-19, and willing to invest in the technology needed to run their businesses more efficiently, evidenced by the fact that UK SMEs lead Europe in terms of their digital adoption.

With our small businesses having put in the time, energy, and investment necessary to reach this point, it seems only fair that the Government and the rest of the industry steps up to provide the next step of connectivity - standalone 5G. The UK is in a unique position - a global leader that has the opportunity now to double down on this advantage and unlock billions of pounds in benefits.

For this to happen, however, connectivity must become an enabler of business rather than a limitation, as is too often still the case. By investing £11 billion to deliver standalone 5G coverage to 99% of the UK population by 2034, the proposed merger between Vodafone UK and Three UK will deliver a genuinely nationwide standalone 5G network, securing a potential £8.6 billion in time savings and productivity gains. This would ensure that the UK not only retains its current position, but jumps 3 places ahead, becoming a real leader. Inaction, on the other hand, puts us at risk of being overtaken by other markets that invest in connectivity and standalone 5G at a much faster rate. The right investment would ensure that the UK remains at the top of the European leaderboard for a further decade to come.



Endnotes

- 1 [FSB, UK Small Business Statistics](#)
- 2 [UK government scheme urges SMEs to embrace 'digital' for business growth](#)
- 3 [ONS, Information and communication technology intensity and productivity](#)
- 4 [Mastercard and Opinium, UK's entrepreneurial ambitions stronger than ever as small business growth outpaces larger companies](#)
- 5 [Capital on Tap, Small Business, Big Impact: The Contribution of Small Businesses to the UK Economy](#)
- 6 [Gov.UK, Apprenticeships and traineeships](#)
- 7 [Financial Times, UK mobile users had slowest 5G download speeds in G7 in 2023](#)
- 8 [FSB, Lost Connection How poor connectivity hinders small firms](#)
- 9 [Vodafone UK, Connecting the Countryside 2023](#)
- 10 [The City of London Corporation, UK leads AI investment in Europe – ahead of France and Germany](#)
- 11 [Gov.UK, UK tech sector retains #1 spot in Europe and #3 in world as sector resilience brings continued growth](#)
- 12 [FSB, Lost Connection](#)
- 13 [EU4Digital, 2030 Digital Compass: the European way for the Digital Decade](#)
- 14 [Le ministère de l'Europe et des Affaires étrangères, Plan de Transformation numérique](#)
- 15 [Federal Ministry for Economic Affairs and Energy, Digital Strategy 2025](#)
- 16 [Reuters, South Korea's high-speed 5G mobile revolution gives way to evolution](#)
- 17 [EY, China is poised to win the 5G race](#)
- 18 SME digitalisation scores are created for each country in our index by aggregating historic data (2018-2022) collected by the EU under its Digital Economy & Society Index, under two metrics. The first is 'digital intensity' - the percentage of SMEs that use at least four modern technologies, such as AI, big data, cloud, or e-commerce. The second is 'digital skills' - the percentage of a country's SMEs that employ people with skills across these technologies. For the UK, historical DESI data (2018-2020) is included in our aggregations until the country's discontinuation from data collection in 2020, alongside more recent surveys that also report on these two metrics.
- 19 This provides a score for each country based on their average upload and download speeds on the 5G network, and their fastest (top 10%) speeds, based on an average of three different verified 5G speed providers: Speedcheck, Speedtest by Ookla and Opensignal.
- 20 As set out in the Department for Science, Innovation & Technology's Wireless Infrastructure Strategy (April 2023).
- 21 <https://www.ft.com/content/095e76a1-6ffd-4962-99e6-33268eebcda9>
- 22 https://www.ofcom.org.uk/_data/assets/pdf_file/0017/232082/mobile-spectrum-demand-discussion-paper.pdf
- 23 [Money \(2023\): UK Business Statistics 2023 - Business Facts and Stats Report](#)
- 24 [Office for National Statistics \(2023\): Business population estimates for the UK and regions 2023: statistical release](#)
- 25 <https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/earningsandworkinghours/datasets/averagehoursworkedbyindustryhour03>
- 26 Regional breakdowns of productivity savings from all SMEs having standalone 5G do not fully add up to £8.6 billion, since the ONS omits some sectoral data by region to avoid financially sensitive disclosures.
- 27 <https://opengear.com/white-papers/white-paper-the-costs-of-downtime/>
- 28 [Vodafone UK, Using 5G and IoT to support more sustainable food production](#)



WPI Strategy Limited

1st Floor,
5-6 St Matthew Street,
London,
SW1P 2JT

@WPI_Strategy

wpi-strategy.com

WPI Strategy Limited, registered address 28 Church Road, Stanmore, Middlesex, England, HA7 4XR, is registered as a limited company in England and Wales under company number 10086986.

March 2024

©2024 DESIGN BY WOND.CO.UK