No One Left Behind:

The UK's Digital Divide in 2021

A WPI report for Vodafone UK

October 2021

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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 and work extensively with our sister company, WPI Economics, to ensure that campaigns are underpinned by evidence-based content.

wpi-strategy.com nick@wpi-strategy.com @wpi_strategy

About Vodafone

Vodafone 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. We have 5G in 100 locations in the UK and 240 across Germany, Spain, Italy and Ireland.

Our 4G network coverage currently reaches more than 99% of the UK population. And in October 2020, Vodafone was named Network Provider of the Year by readers of leading technology advice website, Trusted Reviews.

Today, Vodafone serves more than 18 million mobile and fixed-line customers in the UK. To help deliver Gigabit UK, our full-fibre broadband roll-out programme now covers 15 UK towns and cities through partnerships with CityFibre and Openreach.

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

Foreword

Ahmed Essam
CEO Vodafone UK

From doing the weekly food shop to keeping in touch with friends and family, digital connectivity has become an essential part of participating in society. Yet many people are still not online, or do not have the digital skills necessary to navigate the digital world with confidence. Being online is no longer a luxury but a necessity, from which too many are excluded.

If we didn't already understand how much we all need to be connected, the pandemic has shown us beyond any doubt. School children and university students attended online lessons, many of us had to adapt to remote working, and videocalls became a crucial way of staying in touch with people we were no longer allowed to visit.

For those of us who are comfortable with operating in an online world, and who have the devices and the internet we need to do so, it can easily look as if the same is true of everyone. Those who face digital exclusion in whatever form are easy to miss. The so-called "digital divide" has often been understood as something that affects older people who grew up in a pre-digital world, or those who live in places with poor internet. But there is much more to it than that. There are multiple digital divides that exist, covering access to the internet, software and devices, and digital skills and confidence. Within each of these, there is a social mobility issue.

Polling conducted for this report found that just under a third (29 per cent) of respondents said that they had to share a device (laptop, tablet, phone or PC) for work, education or leisure in the past year. When one member of a family needs a device for work and another needs it for school, both work and learning suffer. Now, with children back in school and learning resources increasingly provided on the internet, it is vital that we keep pupils connected.

It is not just pupils and workers who lose out from a lack of digital access. The more public services move online, from claiming Universal Credit to booking a vaccine appointment, the more vital it is that everyone who needs access has it. This incorporates having adequate digital skills as well as access to reliable connectivity and the right device: over a third of poll respondents (36 per cent) said that they feel they would benefit from digital skills training. This was almost twice as high (63 per cent) for those who are currently not working and seeking employment.

At the beginning of the pandemic, Vodafone made a commitment to keep people connected. We are proud to have provided more than 9,000 schools and colleges with 350,000 SIM cards through our schools.connected scheme. Other initiatives we committed to during the pandemic include VOXI For Now, a heavily discounted connectivity plan for people out of work and the Great British Tech Appeal, which allowed members of the public to donate their old devices.

These initiatives built on wide-reaching support for Vodafone customers, including dedicated plans to support public and private sector organisations provide connectivity for their vulnerable customers, free unlimited data for NHS and care home workers and removing data charges for key websites such as nhs.uk. Along with other businesses, we showed the power of working together at a time of crisis. But digital exclusion was a problem before COVID-19 hit, and it will still be with us when the worst of the pandemic is over.

That's why Vodafone is committed to providing free connectivity to one million people by the end of 2022 through a range of programmes including the Buy One, Give One initiative through which Vodafone will donate free connectivity via the Trussell Trust's foodbanks nationwide to support those desperately in need and charities.connected, allowing charities from across the UK to apply for free data to support those that need it most.

We can help bridge the digital divide in all its forms: lack of connectivity, lack of devices, lack of skills and confidence. This is a societal issue that cannot be solved solely by the industry. It needs government focus, support and funding. By introducing measures such as a voucher scheme and a cross departmental government taskforce, alongside supporting the telecommunications sector through a regulatory and policy framework to help deliver the Government's digital ambitions, working together we can close the digital divide for good.

Introduction

Today, digital connectivity is essential to participate fully in society. With public services and commerce moving online, and with more of us than ever before relying on the internet to keep in touch with friends, loved ones and colleagues, those who lack the devices, the connectivity, the skills and the confidence to take part are at risk of being left behind, and left out. Being online was once a luxury, but it is now more difficult to manage without it. If we expect everyone – schoolchildren, workers, jobseekers, patients, pensioners – to conduct at least some of their day-to-day transactions online, then as a society we need to make sure that everyone can.

This report looks at the "digital divides" that prevent some people from participating fully in the online world. It investigates, with the help of new polling, whether people have access to an internet connection, whether they have the devices they need, and whether they feel they have the right skills needed for everyday life. And it asks which groups, in terms of age, gender, employment status and social class, are most likely to require support before they can meet these new expectations.

As the Government aims to move more public services online, processes such as applying for Universal Credit and completing the census are now done via the internet. However, it is not just government services that are becoming digital. Increasingly, we are seeing tasks such as banking, education and health resources dependent on the internet. For example, in 2019, 73% of all adults did their banking online.[1]

The pandemic has both revealed and exacerbated existing digital inequalities in which sections of our society are disproportionately less connected, due to a lack of access to devices and software and, consequently a lower digital skillset, literacy and confidence. Some households that did not have sufficient internet access, were forced to share devices and did not have access to necessary software. Nationally representative polling conducted for this report has found that just under half of respondents (47%) said that members of their household relied on mobile devices for work or education in the past year and two-fifths (41%) used mobile connectivity as their main source of internet. This demonstrates that people rely on both broadband and mobile connectivity as sources of the internet.

The telecommunications industry has stepped up and played a vital role during national lockdowns, introducing significant measures and working with Government to support these parts of society during the pandemic. Emergency schemes such as Get Help with Technology, schools.connected, the Great British Tech Appeal and zero rating have provided connectivity for those who were at risk of being digitally excluded.

COVID-19 has shone a light on the many types of digital divides that exist, in terms of both access and aptitude. It has also exposed specific issues that we will need to address as we move to an increasingly digitally-reliant society to ensure that no one is left behind. Being digitally connected provides foundational skills, enhances wellbeing, enables businesses to flourish and families to connect.

A new model needs to be established that allows the telecommunications industry to support vulnerable people and public services, whilst encouraging and incentivising investment in new technology such as 5G, Open Radio Access Networks and gigabit capable networks. A partnership approach on certain issues, with Government funding used to fill total not-spots in rural areas and new technologies such as Open Radio Access Networks, is needed to deliver Government's digital ambitions.

We also need reform of the policy and regulatory model to improve the return for those that invest in digital infrastructure. The UK remains a tough environment for this kind of investment with high costs associated with deploying digital infrastructure and a competitive environment. For example, according to Ofcom, prices in mobile have come down 22% since 2015 while data usage has soared by 369%.[2]

As we look to the future, we must seek to address the digital divide that the pandemic exposed. Prior to the pandemic, the digital divide was generally viewed as affecting those who lacked connectivity based on location, or found themselves

excluded due to age. Rural coverage programmes such as the Shared Rural Network and wider network investment have helped to connect those who are traditionally thought of as digitally excluded. Now, 99% of the UK population are covered by Vodafone's 4G network. However, the pandemic has shown us that the digital divide is a wider issue and other groups including low income households are also affected by digital exclusion.

This will continue to be a problem beyond the pandemic as more public services and people's day-to-day work and lives go online, coupled with hybrid ways of working. As much as disparities in access and connectivity have been brought to light during the pandemic, it has also revealed deficiencies in the nation's digital skills, with worrying consequences for the future economy and social mobility.

We need to improve access and digital connectivity and help digitally upskill the nation in preparation for future demands of the workplace and to improve social mobility. The Government should seek to improve how it procures digital devices and data so that they come as a package, introduce a tech voucher scheme and implement a cross department taskforce focused solely on bridging the digital divide.

Connecting one million people living in digital poverty

Vodafone has committed to connecting one million people who are currently living in digital poverty by 2022 using a range of our programmes to tackle digital exclusion and bridge the digital divide. Among other initiatives to reach the million, and in partnership with the Trussell Trust*, our Buy One, Give One scheme will give someone living in digital poverty free connectivity for up to a year for every Vodafone Together household.

*The Trussell Trust is an anti-poverty charity, founded in 1997, that supports those in financial distress through its UK-wide network of more than 1,300 food banks. We'll work with them to connect the people they support.

A nationally representative poll of 1,004 UK residents 18+ was carried out by Savanta Comres in May 2021 to support this report.

Vodafone UK pandemic support

- **Schools.connected**: To support remote education and the ongoing catch up, Vodafone UK provided 350,000 free data SIMs to schools to distribute to pupils most in need of connectivity to access their education online. Vodafone UK subsequently partnered with Mail Force Computers for Kids Initiative to increase the number of SIMs available to half a million and expanded distribution to further education colleges and universities across the UK. Each SIM card had 30GB of data to be used for 90 days.

- **Connecting Families**: Throughout the pandemic, Vodafone teamed up with the Good Things Foundation to provide unlimited data SIM cards and dongles to 2,500 of the most disadvantaged families in the UK. The Good Things Foundation's Connecting Families programme includes specialist one-on-one support to ensure that, in addition to devices and connectivity, every family learns essential digital skills so they can benefit fully from the tech they've been given.

- **Great British Tech Appeal**: Vodafone's Great British Tech Appeal collected and redistributed used smartphones and tablets, along with free data, calls and texts to the people that needed them most. Donations were received from the public and from businesses, data-wiped, reboxed and then sent to their new home, with the help of charities. So far, the appeal has helped over 7000 families in the UK.

- **Communities.connected**: Vodafone launched dedicated plans at a significantly reduced cost to support private and public sector organisations provide connectivity to their most vulnerable customers. This was made available to organisations such as schools, further education colleges, universities, local authorities and charities.

- **VOXI 'For Now'**: In November 2020 Vodafone launched a new plan to help people who have become unemployed as a result of the pandemic to stay connected. The plan included unlimited mobile data, minutes and texts for just £10 a month for up to six months and was open to anyone claiming Jobseeker's Allowance, Employment and Support Allowance or employment-based Universal Credit. This was a lifeline for those whose financial situations changed overnight as the plan gave customers a 70% discount and access to Vodafone's leading network and 5G.

- **Charities.connected**: Vodafone has recently launched this initiative which will give charities across the UK the opportunity to apply for free connectivity to either improve their own digital capability or to help individuals and families who they support who lack internet connectivity.

- **Small businesses**: A series of offers were run for small and existing SME customers including six months free broadband. This gave small businesses struggling through the pandemic an extra boost as restrictions were eventually eased.

Chapter 1: Understanding the digital divide

COVID-19 has focused attention on the digital divide, what it is and what causes it. Our understanding of what the digital divide is has shifted: it is not purely about access to and knowledge of the internet, but includes a wider range of factors whose absence causes a digital divide. As we pivot to meet these challenges, it is vital we take an evidence-based approach to identify and support those that need it most. This report has started the conversation to ultimately work out exactly what is needed.

ONS figures show that before the pandemic, apathy was cited as the most common reason for not having internet access in the household, with 84% of those over the age of 60 saying that nothing could help to get them online.[3] Our polling found that a third (33%) of over 65s stated that they wanted to improve their digital skills as a result of dependence on technology in the past year.

A clear indication of how the narrative surrounding the digital divide has changed is the number of people who now have an internet connection. In April 2021, Ofcom reported that only 6% of UK homes had no access to the internet, compared to 11% in March 2020.[4] Evidently, connectivity through broadband has significantly increased and there are ambitions on mobile connectivity to deliver 4G coverage to 95% of the UK landmass through the Shared Rural Network. However, we recognise some people still do not have consistent and reliable access, which helps define today's digital divide.

The polling found that in the last year, 41% of respondents used their mobile phone as their main source of internet for work or education. This is higher (57%) among 18-24-year-olds and those not working and seeking employment (67%). A further 20% of respondents relied on their mobile for the internet when working. This highlights that not everyone uses broadband as their main source of internet and that mobile is a growing source of internet for many.

The digital divide needs to be broadly defined, and exists in multiple forms across the UK. It impacts various sectors of society differently and spans each aspect of being online. Access to sufficient devices, relevant software and the necessary skills are as important as connectivity. In the past year, many have had to share devices in their households or relied on mobile data to keep them working. Some simply did not have access to the correct software to enable them to complete their work or education.

Our polling provides a snapshot of what the divide looks like across the whole of the UK in terms of access:

Connectivity

- One fifth (20%) of respondents said they mainly relied on mobile data when working in the past year. This was much higher among 18-24 years old at 57%. For those not working and seeking employment it was far higher – 67%.
- 41% use mobile connectivity as the main source of internet.

Devices

- Just under half (47%) said that members of their household had to rely on a mobile device for work or education.
- Over a quarter (29%) of respondents said that they had to share a device (laptop/tablet/PC) for work, education or leisure in the past year. This was most prevalent among young people: half (50%) of 18–24-year-olds said they had to share a device.

Software

- Over a fifth of respondents (23%) did not have the relevant software in their household to complete their work, education or leisure.
- 86% of those in employment had access to the correct software, compared to 61% who are not in employment. This highlights the disparity between the employed and the unemployed that will only be further exacerbated by the pandemic.

Digital skills

The level of digital skills and people's ability to perform tasks online is as vital as connectivity and access to assessing how digitally included a society is.

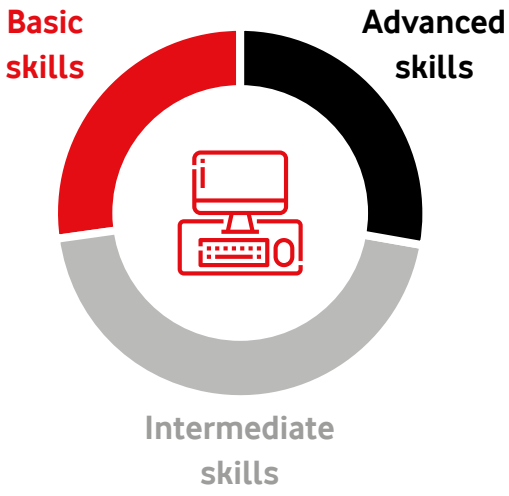
Digital literacy, the ability to set up a new device, access to online banking and government services all rely on foundational digital skills and confidence to be online.

Digital Skills definition

Our polling was based on self-perception to get an understanding on the public's opinion of its own skills. For the purpose of this report, we have broken down the different levels of skills to define them as the following:

- **Basic digital skills enable us to function at a minimum level in society.**
- **Intermediate skills enable us to use digital technologies in even more meaningful and beneficial ways, including the ability to critically evaluate technology or create content.**
- **Advanced skills are those needed by specialists in ICT professions such as computer programming and network management.**
- **Foundational skills underpin all essential digital skills, including turning on a device and having an understanding of a password.**

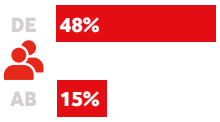
Our polling provides a snapshot of how the nation assesses its own digital skills, confidence and its desire to improve its digital ability, following the events of the past year:



A quarter (28%) of UK adults describe their current digital skills ability level as basic, with 45% describing it as intermediate and 27% as advanced.

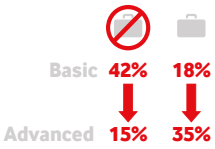
Age:

The majority (**54%**) of those aged 65+ said that they had basic skills with only **7%** saying they had advanced skills.



Socio economic status:

Those in social grade DE (**48%**) are most likely to describe their digital skills ability as basic, compared to the social grade AB where only **15%** stated that their skills were basic. This inverts for those who stated that their skills were advanced, with those in the social grade AB most likely to state that they had advanced skills (**36%**), double those in social grade DE (**18%**).



Employment:

There was also a disparity between those who are employed and those who are not: **42%** of those not in employment rated their skills as basic compared to **18%** of those who are in employment. Only **15%** of those not in employment said that their digital skills were advanced, compared to **35%** of those in employment.

Confidence:

64% of those who were not working said that they were not confident in using advanced functions on Microsoft programmes (or equivalent processing platforms).

Access to services:

21% of 65+ year olds don't believe that they have sufficient skills to access online shopping and public services independently. There is also a disparity for those in the social grade DE, with **20%** also believing that they don't have sufficient skills to access online shopping and public services independently.

Desire to improve:

Two-fifths of respondents (**41%**) said that dependence on technology in the past year has made them want to improve their digital skills.

Training: Over a third of respondents (**36%**) said that they feel they would benefit from digital skills training. This was almost twice as high (**63%**) for those who are not working but seeking employment.

1 The social grading system **A, B, C1, C2, D, E** is a socio-economic classification developed in the mid-20th century and is widely used in market research. For further information please see Annex 1.

This data suggests that the public as a whole are relatively confident that they have basic digital skills, but with pronounced gaps in self-perception across income and age.

Giving young people the digital skills needed to succeed

Barnardo's and Vodafone have partnered to provide digital training and career opportunities to some of the most disadvantaged young people in the UK.

Many of the young people Barnardo's support are not in education, employment or training (NEETs) and often face considerable personal challenges such as homelessness, learning difficulties and disabilities and mental health issues. NEETs are also one of the highest risk groups to face digital exclusion, resulting in greater difficulty when seeking a job or getting into further or higher education.

Through Discover Digital, around 3,000 young people (16-24) on Barnardo's employment, training and skills programme now have access to a range of digital skills training and 1:1 support. From basic training such as how to apply for jobs or manage money online, to more advanced courses on digital marketing, coding or cybersecurity, the programme is giving young people the digital education needed to succeed in work and life.

Jack's story:

Jack is a young person with additional barriers to accessing employment and struggled with the confidence and skills to use the internet to improve his employability. Whilst working with his Barnardo's project worker he expressed a desire to explore careers in coding and digital. Using Discover Digital Jack was able to use the Future Jobs Finder to explore careers and also completed a short basic coding course. Supported in 1:1 career-focused sessions, he is now accessing an advanced coding programme with the hope to apply for digital bootcamps and find employment.

The divide across socio-economic status and employment levels is only likely to be exacerbated as technology advances. Without addressing those who are currently digitally excluded, the digital divide will only get worse, with parts of society being left further and further behind.

Our polling also shows an appetite among those who believe they do not have sufficient digital skills to improve their ability, suggesting that better training initiatives, specifically targeted at those who are not in employment, would be beneficial.

It is clear from our findings that defining the digital divide requires far more than simply determining who has access to the internet. The past year has shown us how important it is to ensure that everyone is connected and has the confidence to be online. It is vital that as we learn the lessons of the pandemic, we do not forget about those who are digitally excluded.

Chapter 2: The real-life impact of the divide in 2021

A fully digitally-enabled society has very real benefits including being able to access medical advice from professionals at home, ordering food and goods, applying for jobs, applying for government support and performing bank transactions. This dependence on the internet and digital devices consequently has implications for everyday life. For those without such easy access, performing simple online tasks and accessing online services is difficult. For those who have been digitally unconnected, the past year has been a struggle.

Our polling results further highlight these inequalities:

- **Gender:** 17% of women are not confident in setting up an account that allows you to buy goods or services, compared to 9% of men.
- Almost twice as many women (42%) as men (24%) said that they were not confident with explaining how to use and update devices or software.

- **Age:** Over 65s were the age group who were the least confident to perform technical tasks.
- 60% of over 65s said that they were not confident with setting up a new piece of software or device and connecting it to the internet.
- 44% of over 65s said that they were not confident with using video sharing platforms.
- 35% did not have access to essential online public services and food shopping.
- One third (32%) of over 65s are not confident in setting up an account that allows you to buy goods or services.
- 61% of over 65s said that they were not confident in explaining how to use and update devices.
- 76% of 18 to 24 year olds had to rely on a mobile device for work or education in the last year, compared to just 47% of the whole population.

- **Socio economic status:** A quarter (23%) of those in the social group DE are not confident in using a search engine to access government services or apply for a new passport.
- One-fifth (20%) of all respondents said that they don't feel confident determining whether a news article or a piece of information online is from a reliable source.
- This is most prominent in the social group DE where 32% said they were not confident with determining whether a news article was from a reliable source.
- 44% of those in social group DE did not have access to the relevant software (e.g Microsoft Excel, PowerPoint, Word or equivalent) needed to complete their or another member of their household's work or education in the last year, compared to 23% of the population in total.

- **Employment:** 39% of those not working, but seeking employment, did not have access to the relevant software (e.g. Microsoft Excel, PowerPoint, Word or equivalent) needed to complete their or another member of their household's work or education in the last year, compared to 14% of those who are employed.

Services

Core government services such as applying for new passports, driving licences, checking National Insurance contributions and viewing tax letters from HMRC are all now available online through the Government's GOV.UK gateway service. The Government is increasingly focused on moving almost all services online.[5] Additionally, the Government is currently building on a small pilot to develop GOV.UK and expand digital identity to provide personalised, seamless and intuitive online services.[6] This means that internet access and digital devices will be required to access essential services such as Universal Credit. Many of those who need these essential services are also the least likely to have the skills and confidence to be able to do so online.

Our polling shows that a significant proportion of the population believe they do not have access to essential online services. This is especially true for those in socio-economic group DE.

Just under a fifth of respondents (19%) said they did not have access to essential online public services and a quarter (25%) said they only had access some of the time. 68% of those in socio-economic group DE said they had access to essential services. The other socio-economic groups (A,B,C1,C2) were much more likely to say they had access to these services, with AB the highest at 89%.

Education

In the past year, education has been severely impacted, with school students unable to be in classrooms, universities unable to have students on campus, and adult education unable to take place in person.

The Government took steps to mitigate the effect on people's education. The Department for Education supported millions of people throughout the pandemic through its Get Help with Technology Scheme during Covid-19 programme which distributed more than 1.3 million laptops and tablets and provided schools, colleges, other further education institutions, trusts and local authorities with 4G wireless routers that they could lend to disadvantaged students.[7]

Whilst measures were introduced to prevent pupils from missing out on vital education, research from the Sutton Trust revealed that at the beginning of the January lockdown, 47 per cent of state school senior leaders reported that their school had only been able to supply half of their pupils or fewer with the laptops they needed.[8]

It has become clear that digital access is critical for education, work and social mobility and people no longer just need access to the internet but the tools – devices and skills – to utilise the technology. Any device provided for the most vulnerable pupils should also include connectivity, the relevant software and the support needed to enable the person to get online – be that skills, confidence, awareness or training. Support has to be provided as a whole package to truly bridge the digital divide.

These findings make it clear that without action, we risk leaving behind the most vulnerable, which will not only have a detrimental impact on the wealth of our economy but the health of the country and its future potential.

Henna's* Story - Improving Educational Chances

Henna strives for a career in business and aims to complete a degree apprenticeship to kick-start her career.

However, Henna cannot begin her degree apprenticeship until she passes her English Language GCSE. Henna is one of around 200,000 young people who leave school each year without this passing grade in English and/or maths GCSE and are therefore locked out of many university courses, apprenticeships, and professions.

Determined to pass her English GCSE and overcome distractions, Henna signed up for tuition with Get Further, an educational charity that matches students facing challenges in further education to trained, graduate English and maths tutors. During the pandemic, Get Further has scaled its work tenfold to reach more young people in need of extra help to get back on track in education.

Studies have shown that having a tutor is one of the most effective types of intervention in education. Too often, this is out of reach for young people in further education on low incomes – Get Further exists to address this.

Get Further provides each student with online resources, plus a bespoke tuition booklet designed by expert teachers. This hybrid style of digital learning was critical during national lockdowns. 'Having the booklet made me feel like I was in a classroom,' Henna explains. 'Everything was clear. I liked the different exercises, and the way things were set out.'

However, initially Henna was only able to access her online tuition sessions via her phone. Technical issues with audio, a short battery life and a small screen made it difficult for Henna to interact with her tutor.

To address this, Get Further partnered with Equal Education, a social enterprise that helps children in care and those with special educational needs and disabilities access high-quality tuition. Thanks to a grant from Innovate UK, Equal Education was able to secure and licence educational iPads to learners across the country to support them during Covid-19.

With the support of Equal Education, Get Further was able to provide Henna with an iPad so she could access her online tuition sessions. This transformed her learning experience. She noted that, 'instead of being distracted by technology issues... everything was there for me and all I had to do was attend the session.'

For six months, Henna had a tuition session every week. Henna soon found herself making excellent progress in her English. 'I saw myself building up my confidence in communication,' she says. Alongside securing a GCSE qualification in English, which will unlock a degree apprenticeship for Henna, these communication skills will help her business career to thrive.

Get Further will expand its support next year to over 2,500 young people, and with the continuation of its partnership with Equal Education, help students regardless of their background and digital situation access high quality tuition.

*Henna is a pseudonym, she is 19

Chapter 3: The long-term impact of the digital divide

The Government's 2017 Digital Strategy recognised the importance of digital inclusion and giving everyone access to the digital skills they need. But digital exclusion still remains high: the Lloyds Bank UK Consumer Index (2020) found that 52% of the UK workforce are not yet fully digitally enabled.[9] This has significant implications for business and productivity as well as social mobility if the digital divide in all its forms is not comprehensively addressed.

Business and productivity

If the digital divide is not comprehensively addressed the UK runs the risk of being left behind, especially in the more data intensive jobs of the future. The Government says that the full potential of the data economy is as much as £125 billion,[10] and whilst the data economy addresses far more technical and digitally inclined roles, it has been estimated that within the next 10-20 years 90% of jobs will require some form of digital skills.[11]

Having a digitally enabled society also has the potential to support economic growth. Previous research commissioned by Vodafone calculated that the move from 4G to 5G mobile connectivity could generate a productivity boost worth more than £150 billion to the UK economy over the next decade: in manufacturing specifically, the boost could be as much as £6.3bn by 2030.[12] As we recover from the pandemic, we must ensure the UK has the skills to realise the benefits of advances in mobile technology.

Ultimately, there needs to be a strong emphasis on helping to develop and improve digital skills for all members of society. Our polling has shown that there is a strong appetite from individuals to improve their digital skills, echoing existing research that shows 63% of UK employees did not agree that they had the appropriate digital skills to fulfil new and emerging roles in their industry.[13] We are therefore calling on the government to work with employers to expand the number of digital courses available on the national Skills Toolkit, and to do more to encourage the uptake of those courses. Government should also consider allowing the underspend of apprenticeship levy funds to be used to retrain existing staff in key digital roles such as data science and digital engineering.

Social mobility

With digital skills having such a pronounced impact on the careers of today and of the future, it is inevitable that those who are digitally excluded will be disadvantaged most. Lloyds Bank Consumer Index found that people with an annual household income of £50,000+ are 40% more likely to have foundational digital skills than those earning less than £17,499.[14]

A lack of digital skills and/or accessibility is also impacting those at schools. Existing research found that 57% of private school pupils were taking part in daily online lessons during the peak of the pandemic, compared to 23% in the state sector. That falls to as low as 8% in the most deprived schools.[15] Evidence also shows an overlap between digital exclusion and social exclusion, and then social exclusion and poverty, and poverty and health inequalities.[16]

There is also a clear link between digital skills and employability. Data from the Good Things Foundation' shows that 76% of those who improved their digital skills went on to find employment.[17]

Akram's Story - Connecting Families

Farida Begum, 41 from Birmingham has five boys and two girls, making for a busy household with lots of comings and goings. When the COVID-19 pandemic forced the UK into lockdown in March 2020, it left her family sharing one laptop between them with poor internet connection.
With one of her sons, nineteen-year-old Akram, having severe autism and needing to carry on with his studies, Farida knew she had to act.

She got in touch with one of the mainstream schools in the area who lent her a laptop. However, due to Akram's challenging behaviour, exacerbated because of lockdown, she feared that the laptop would get damaged and that she'd have to pay for it. She tells us: "It got to the stage where I told the school that I didn't know what to do. Financially I'm already struggling and I just couldn't afford for Akram to damage it so I ended up giving it back."

It was at this point that the school referred Farida to Smartlyte, a community organisation in Good Things Foundation's Online Centres Network. The school had been working with Smartlyte on the Connecting Families programme and identified Farida as somebody that would really benefit from receiving a device. Farida explains: "Being given a device from the Connecting Families programme took out that fear and worry that comes with borrowing one."

Farida saw an immediate impact on Akram, who is in his final year at The Calthorpe Academy. The device has allowed Akram to put a CV together for the first time so that he can start applying for colleges in September. But it's in his behaviour that Farida has seen the biggest change: "Before receiving the device his behaviour went to the extreme and was very challenging. He never really had full use of technology because we only had one laptop in the household so when he received the tablet it just changed him."

The change has not only been beneficial for Akram but the whole family. Farida goes on: "Because it's made him calmer, it has made us as parents a lot calmer. We don't have to focus on his challenging behaviour as much now. Because he's focussing on something proactive, it's lessened that stress on us. The device has given him more responsibility and he's matured a lot."

Understanding the skills gap

Research for this report asked over a thousand respondents how confident they felt with completing digital tasks. We have categorised these tasks into basic, intermediate and advanced.

Our results offer a snapshot of the public's perception of its own digital skills: there is a stark difference in the confidence respondents have between basic and advanced skills. This is important to understand and helps us determine what the future skills gap could be.

Basic skills:

Task	Net confidence
Using a search engine to access government services, HMRC services, or apply for a new passport.	87%
Researching and applying for a new job online.	80%
Managing my personal finances online.	83%
Determining whether a news article or piece of information online is from a reliable source.	80%

Intermediate skills:

Task	Net confidence
Setting up a new piece of software or device and connecting it to the internet.	71%
Using a video sharing platform (e.g. Zoom, Microsoft Teams, Google Meet) for work, education or to keep in touch with family members and friends.	79%
Backing up data (e.g. files, pictures) on your mobile or desktop device.	74%
Protecting myself from phishing scams.	82%

Advanced skills:

Task	Net confidence
Using a piece of Internet of Things (IoT) technology (e.g. smart home security systems, energy saving devices, wearable health monitors).	53%
Using advanced functions on Microsoft programmes.	49%
Being able to understand, use, or write coding language.	23%
Designing or creating a website.	28%

The digital divide has significant implications for the future economy. This has a knock-on-effect on the data skills gap which, if not addressed, means the UK risks falling short of its potential in terms of the requirement that future jobs will need. Additionally, it will have significant effects on social mobility which is at risk of worsening as more jobs require more digital skills.

Vodafone has committed to connecting one million people living in digital poverty by 2022

Chapter 4: Recommendations

Our findings show how important it is to tackle the digital divide in all of its forms, learning what we can from the pandemic and making tangible changes to ensure that the gap does not widen further. We are calling for robust action from Government and our recommendations are as follows:

- **Information gathering:** The Government should undertake a review to better understand who is digitally excluded and identify what support they may need, thereby creating the data points needed to effectively target those most vulnerable and in need rather than blanket approaches. A two-pronged approach to monitoring can be applied, as recommended by UNICEF. This involves tracking at both national and local authority levels the proportion of young people who have adequate digital access.

- **Taskforce:** The Government should consider setting up a cross-departmental taskforce including DCMS, DfE and DWP working together to look into the effects of the digital divide and set goals on how to tackle this as a social issue and ensure that no one is left behind. The taskforce should consult with an established working group including employers, unions, charities and ministers. The Government should also consider establishing a position within Government to lead the efforts and hold the taskforce and working group to account, similar to the net-zero business champion.

- **Procurement:** The Government has taken steps to provide connectivity for vulnerable children affected by Covid-19 to gain internet access at home. The Government should build on its Get Help with Technology Scheme, including grant funding available to schools, and revise its current approach to procuring digital support for vulnerable people. A complete package should be procured with both connectivity and devices included, similar to the model being adopted in Scotland through its Connecting Scotland programme. This addresses the different circumstances that people face, that can rapidly change.

- **Voucher scheme:** Not everyone in the UK has a 4G device, and we must do everything we can to ensure that all of society has the digital connectivity they need. The Government should introduce a voucher scheme to support those on low incomes upgrade their devices. When considering such a scheme the Government should look at the importance of device and software upgrades to ensure that any devices being given do not become obsolete and then not able to use the latest technology, including apps. This will help prevent challenges such as those seen with the NHS Covid track and trace app which, when launched, did not work on smartphones which no longer receive major software upgrades and help. It will also help with broad objectives for Government such as 2G/3G shutdown and the emergency alerts system.

- **Improving digital skills:** The Government should encourage employers to actively bridge the digital divide by making it a factor in businesses' Environmental and Social Governance (ESG) requirements. This could include:

    - The Government establishing a "Race to end the digital divide" scheme that provides support and resources to allow employers to upskill their workforce.

    - The Government working with employers to encourage the uptake of courses on its national Skills Toolkit which offers free courses across a range of skills, including advanced digital skills such as coding.

    - The Government considering allowing the underspend of apprenticeship levy funds to be used to retrain existing staff.

    - Finally the Government's Help to Grow Digital scheme should be used as an opportunity for the Government to fund skills provision.

- **Infrastructure:** The Government should continue to give its full support, including funding, for programmes such as the Shared Rural Network and for the rollout of 5G. For the UK to deliver its digital ambitions and lead on the world stage, there needs to be a fundamental review of the current regulatory framework to create the right environment which incentivises and promotes investment in digital infrastructure so that the mechanisms are in place to help bridge the digital divide.

Annex 1

The national polling for this report categories the six occupational groups as the following:

A B

- Professionals; very senior managers in business; top-level civil servants.
- Retired people who worked in a grade A job.
- People whose late spouse or civil partner worked in a grade A job.
- Middle-management executives in large organisations, with appropriate qualifications.
- Principal officers in local government and the civil service.
- Top management or owners of small businesses and educational and service establishments.
- Retired people who worked in a grade B job.
- Retired people whose late spouse or civil partner worked in a grade B job.

C1

- Jobs in this group have very varied responsibilities and educational requirements.
- Junior management, owners of small establishments and all other non-manual workers.
- Retired people who worked in a grade C1 job.
- Retired people whose late spouse or civil partner worked in a grade C1 job.

C2

- Retired people whose late spouse or civil partner worked in a grade C2 job and who now themselves receive a pension based on that job.
- Skilled manual workers.
- Manual workers with responsibility for other people.
- Retired people who worked in a grade C2 job and who now receive an occupational pension.

D

- Retired people who worked in a grade D job and who now receive an occupational pension.
- Semi-skilled and unskilled manual workers, apprentices and trainees of skilled workers.
- Retired people whose late spouse or civil partner worked in a grade D job and who now themselves receive a pension based on that job.

E

- Unemployed for more than six months (otherwise classify on previous occupation).
- Off sick for six months or more (unless they are still being paid by their employer).
- Casual workers and those without a regular income.
- Intermittent workers in receipt of income support.

Endnotes

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7 Department for Education (2020) Get help with technology during coronavirus (COVID-19)
8 The Sutton Trust (2021) Learning in Lockdown
9 Lloyds Bank (2021) UK Consumer Digital Index 2021
10 Department for Digital, Culture, Media & Sport (2021), Quantifying the UK Data Skill Gap
11 Skills Funding Agency (2016) Review of publicly funded digital skills qualifications
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16 The Lancet (2020) COVID-19 and the digital divide in the UK
17 Good Things Foundation (2020) Building a Digital Nation

WPI Strategy Limited

11 Tufton Street,
London,
SW1P 3QB

@WPI_Strategy

wpi-strategy.com

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