

Executive Briefing

The Economic Case for Digital Inclusion **Cebr 2022**

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Investment in improving the digital skills of those who are digitally excluded in our society will lead to significant benefits for the UK economy. Understanding the scale of these economic benefits should be critical for those making decisions about policy and investment, at a national, regional and local level. This paper sets out the economic case for investing in interventions to help digitally excluded people build their basic digital skills. It is based on analysis by Cebr (Centre for Economics and Business Research), commissioned by Good Things Foundation in partnership with Capita.

Headlines

- For every £1 invested in interventions to enable digitally excluded people to build their basic digital skills, a return of £9.48 is gained throughout the economy, with a returned Net Present Value of £12.2 billion.
- Significant progress has been made reflecting the hard work of citizens and communities, public, private and voluntary sectors, especially in the pandemic. Cebr estimates the number of people without basic digital skills in the UK has fallen from 12.4 million at the end of 2019 to an estimated 10.6 million by the end of 2022.
- Investment must continue. The digital divide may have narrowed but it has also deepened. Without further intervention in building basic digital skills, 5.8 million people are estimated to remain digitally excluded by the end of 2032, of whom 3.7 million are aged 75 years or older.
- From 2023 to 2032, 470,000 are expected to gain basic digital skills without intervention each year. Assuming that 750,000 will still lack or have lost their digital skills by the end of the 10 year period, an estimated 508,000 people need intervention to build their basic digital skills, annually. Over the ten year period, the estimated total costs of providing this intervention sum to £1.4 billion, and economic benefits accrue to £13.7 billion.
- Savings to the public purse are strong, with estimated benefits to the government of £1.4 billion through efficiency savings alone, plus £483 million in increased tax revenue, with the NHS expected to save £899 million in addition.
- A proportion of working-age adults still need digital skills support to gain work or better work. Meeting this need is estimated to generate £2.7 billion for corporations through filling basic digital skills vacancies, as well as £586 million in increased earnings, a further £179 million in additional earnings from finding work, and £76 million in environmental benefits.
- Citizens also benefit through time saved from using online government and banking services (valued at £3.9 billion) and money saved through online shopping (£3.5 billion).

Achieving a digitally included society will not happen without strategic, coordinated action targeted at the people and places where need is greatest, taking a holistic approach. Digital inclusion strategies at all levels – from county councils to combined authorities – should recognise that the most challenging stretch of the country's digital inclusion journey lies ahead. There is a risk that momentum will be lost, and lessons learned in the pandemic will be forgotten.

The Cebr analysis provides a solid base from which local authorities, combined authorities, city regions and national governments can build their business case. Even without monetizing the wider social, health and civic benefits (such as reduced loneliness) or calculating cost savings in other sectors (like social care), the economic case for investing in digital inclusion is clear.

Digital inclusion for all

For most of us, using the internet is part of daily life. We use digital skills at work, to socialise, to access healthcare, buy groceries, to bank, and to make everyday, time-consuming tasks easier. As a consequence, people without the access, motivation, confidence and basic digital skills to use the internet face exclusion in our modern, digital world.

The good news is that digital inclusion has increased in the last five years, accelerated in the pandemic as people went online through necessity. This success reflects the achievements of citizens and communities, public, private and voluntary sectors in tackling digital exclusion. However, not everyone benefited: while the digital divide may have narrowed in the past two years, it has also deepened. UK Essential Digital Skills reports point to worrying findings that, for people aged 75 years and older, the number of people without the 'Essential Digital Skill for Life' grew by 5% from 2019 to 2020, and by 11% from 2019 to 2021 (Lloyds Banking Group 2021).

Lockdowns, social isolation, experiences of poor physical and mental health, care and support needs, disruptions in service provision, and also in training for adult learners, and low income – will have variously contributed to loss of digital skills for some who were previously online, and disengagement from opportunities for others (Age UK 2021, Lloyds Banking Group 2021, NELEP 2022).

Evidence of what works in delivering digital inclusion in practice consistently points to the need for sustained, patient, trusted support for older people and working-age adults who are furthest away from being digitally included: finding the right hook, motivating people through quick wins, reassuring and being there when things go wrong, or to provide further support when learning to do new things online. So it is perhaps no surprise that we now face a more mixed picture. As Cebr's analysis suggests, the most challenging stretch of the country's digital inclusion journey lies ahead. If we are to achieve an inclusive recovery and ensure everyone has the opportunity to benefit from the digital world – we have to step up to this challenge.

Digital exclusion is an urgent issue which, coupled with cost of living pressures, risks widening inequalities between households and regions (Allmann 2022, Helsper 2021, Yates et al 2021). In the last two years, the level of public and political awareness has risen about the social, economic and public health benefits of digital technologies, notwithstanding risks of online harms. Crisis has spurred innovation and adoption, creating an even more digitised society. Yet, as we look towards recovery and levelling up, there is a clear risk that digital inclusion drops down the policy agenda – at the same time as the accelerated pace of channel shift continues in essential services.

That is why Good Things Foundation, supported by Capita, commissioned the Cebr to update their economic analysis first undertaken in 2015 and repeated in 2018. This executive briefing summarises the findings and makes recommendations.

Cebr's economic analysis

The Cebr (2022) study estimates the current level of digital exclusion within the UK and looks at nine different streams through which interventions to build basic digital skills can benefit the UK economy.

Given the Covid-19 pandemic's impact on society and also on data collection, care was taken to reflect change while minimising risks of using outlier data for future projections. Aside from slight modifications to improve robustness, the approach was consistent with the methodology used in previous reports to enable comparison. The methodology is detailed in Cebr's 2022 report – both for transparency and to stimulate discussion on building the business case for digital inclusion.

Data used by Cebr come from multiple sources including Office for National Statistics, UK Essential Digital Skills data (Lloyds Banking Group with Ipsos Mori), Good Things Foundation, Cabinet Office and the Department for Transport. In the 2022 analysis, the same cost base is used as in 2018, adjusted for inflation; eight of the nine benefit streams are the same (with environmental benefits replacing leisure benefits). A revised target is set compared to the 2018 report to reflect that full digital inclusion is unlikely: Cebr's 2022 analysis assumes 750,000 adults will still lack, or have lost, basic digital skills by the end of 2032 due to personal choice or circumstances.

Pandemic-related change is addressed in these ways. First, calculating the number of people gaining digital skills using 2019 as a baseline as the most recent non-Covid year. Secondly, using Essential Digital Skills data for 2019, 2020 and 2021 to estimate the proportions in each age groups who do not have basic digital skills. Thirdly, using pre-pandemic data trends to create a more robust projection of the number of people without basic digital skills at the end of each year, and identifying out of this total the number in each age band who require intervention.

Calculating costs

According to Cebr's analysis, the number of people without basic digital skills in the UK fell from 12.4 million at the end of 2019 to an estimated 10.6 million by the end of 2022; and without further external intervention in basic digital skills, 5.8 million people are likely to remain digitally excluded by the end of 2032. Of these, 4.93 million people are 65 years or older and 870,000 people are under 65 years old.

Cebr estimates that 508,000 people each year will need an intervention to build their basic digital skills, while 474,000 people each year will gain skills themselves without intervention - for example, being shown how to use the internet by family, friends, or informally by a work colleague. (Cebr calculates this using a multiplier of 0.96% based on data from 2018 and 2019 to minimise the risk of outlier data being used to estimate long-term trends. It factors in an estimated 750,000 people who will lack or lose basic digital skills by the end of 2032, and is averaged over the ten year period.)

The number of people with basic digital skills is projected to decline across all age bands without intervention, albeit at different rates. Older groups are projected to gain skills at a slower rate. This is reflected in the profile of the population expected to lack basic digital skills by the end of 2032, and therefore also the target group for intervention. Around 85% of the target group is 65 years or older.

The target population impacts the costs of intervention - as this population group is likely to require more active engagement and more sustained support. Using cost data on delivering basic digital skills support from Good Things Foundation and adding on costs of a basic smartphone for those likely to lack a device, the estimated total costs of intervention sum to £1.4 billion over ten years.

Calculating benefits

Cebr's analysis finds the economic benefits of investing in digital skills interventions are considerable, amounting to £13.7 billion over ten years, across nine benefit streams. Benefits are calculated only in relation to the target population for intervention (so do not include benefits from the 474,000 people each year projected to gain basic digital skills themselves without support).

Savings to the public purse include estimated cumulative benefits of £1.4 billion in government efficiency savings and £899 million in savings to the NHS from reduced GP appointments. These benefits arise from people receiving support to gain digital skills and confidence in using online services, accessing online information and wider wellbeing. This is especially relevant to the high proportion of adults in later life in the target group, many of whom will live alone, provide or receive informal care, and/or have a disability or health condition (Stone 2021, 2020).

Basic digital skills for everyday life are vital for inclusive economic growth. In 2021, 92% of employers said that basic digital skills were important for their employees (World Skills UK 2021). While the number of employed and unemployed people in the target group is smaller, it is highly significant to policies for levelling up and tackling socio-digital inequalities. This group will need digital skills support to seek and gain work, or gain better work (Mather et al 2021). Meeting this need is estimated to generate £2.7 billion for companies through filling basic digital skills vacancies, £483 million for the public purse in increased tax revenue, £179 million in earnings from finding work, £586 million in increased earnings from those already in employment, and £76 million in environmental benefits over the ten year period. Environmental benefits is a new stream, and an area we are keen to explore in future, reflecting both benefits (such as through refurbished devices) and costs (such as energy consumption). Benefits

to individuals gaining basic digital skills are also considerable, through time saved by using online government and banking services (£3.9 billion) and money saved by online shopping (£3.5 billion) (Lloyds Banking Group 2021).

The result is a positive cost-benefit ratio of £9.48 return for every £1 invested in supporting 508,000 people annually to gain basic digital skills from 2023 to 2032. The Net Present Value of investment is £12.2 billion (2022 prices), applying a discount factor of 3.5% in line with HM Treasury Green Book 2022.

What's changed

In 2022, the economic benefits of investing in basic digital skills are considerable at £13.7 billion over the ten year period. The cost-benefit ratio is high: nearly £10 return for every £1 invested. It is lower than in the 2018 report (nearly £15 return for every £1 invested). There are three reasons for this.

First, the positive and good news story of a continued increase in people getting online means the size of the challenge is smaller. The overall number of people who require external support to gain basic digital skills over the ten-year period has fallen from 6.9 million people in the 2018 report to 5.1 million. Although the total number of adults without basic digital skills has fallen (from 11.3 million in 2018 to an estimated 10.6 million people in 2022), the pandemic years are expected to have widened the gap between those most likely and least likely to gain basic digital skills without intervention.

Secondly, the profile of the target population is different. There is now a higher proportion in older age bands, especially aged 75 years or older. As Cebr's report explains, source data from the Essential Digital Skills survey plays a big part in this shift: it shows a decrease in the share of people who are 75 years or older with the 'Essential Digital Skill for Life' from 30% in 2019 to 26% in 2021, increasing the number without digital skills at the beginning of the appraisal period, and the total number that will need to gain digital skills by 2032. This is compounded by findings from ONS internet usage data which show that the pace of increase in gaining skills is slower for older age groups. So the scale of the challenge is harder (more intensive, sustained support is needed). While annual investment costs are lower than 2018, they are less than proportionate to the reduction in the number needing support.

Thirdly, the changed demographic in the target group has also affected the monetary value of benefits derived through four of the nine benefit streams (corporate, earnings, employment, and government revenue), as benefits from these streams are generated from those who are economically active. As 92% of the target group are economically inactive (only 15% of the target group are of working-age), this has further reduced the economic returns on the total investment in this model.

Future analysis will benefit from a full review of costs and benefits data, including how to put a value on social, environmental, health and wellbeing benefits (such as reduced loneliness, increased voice and improved independence - see Mackey et al 2022).

Recommendations

Much has been achieved but there is a risk that momentum will be lost and inequalities will widen. This is particularly serious for older populations and adults facing deeper disadvantage. The economic case for investment is strong. What is needed now is action at all levels.

Good Things Foundation's new strategy, '[Fixing the Digital Divide - for Good](#)', sets out our ambition and offer to partners: the National Databank, National Device Bank, and National Digital Inclusion Network - social infrastructure for a digitally included society. We want everyone to have the internet access they need; everyone to have somewhere local to go for help to use the internet; and everyone to feel able and safe in the online world. This will require collaborative and innovative partnerships.

Below, we set out our recommendations for policy makers and strategic leaders at all levels of government, and for place shapers, service providers and commissioners.

- Achieving a digitally included society will not happen without a strong social infrastructure for digital inclusion, and strategic, coordinated action targeted at the people and places where need is greatest. This will require resources to ensure that any community organisation, anywhere, has the support they need to Fix The Digital Divide in their community.
- Recognise the most challenging stretch of the nation's digital inclusion journey lies ahead; the current pace of progress will not fix the digital divide. There needs to be an acceleration in digital inclusion action, prioritising those experiencing the greatest barriers.
- Build on lessons learned during the pandemic to sustain momentum. People need a holistic digital inclusion offer which reflects their individual needs - including devices, internet data, and support. This is best delivered by trusted local organisations coordinated nationally.
- Make the case for digital inclusion in priority policy areas, where failure to tackle digital exclusion will block progress: the levelling up agenda and UK Shared Prosperity Fund, reducing health inequalities, sustainable inclusive growth, digital health and social care.
- Build on Cebr's analysis to develop the business case for investment. Supplement this with local data using the Digital Exclusion Risk Index, and follow the progress of innovative work to develop a national benchmark: a Minimum Digital Living Standard for households.
- Raise awareness among service providers, housing associations, libraries and community organisations of the free resources available through joining the National Digital Inclusion Network, National Databank and National Device Bank.

Annex: Summary of Cebr 2022 benefits streams

Government Efficiency: Benefits to the public purse from efficiency	<p>Efficiency saving from use of government digital services for each group of 508,000 learners who receive support annually of £30 million. Cumulative saving of £1,355 million.</p> <p>The UK is a world leader in government digitisation. Cebr estimates the increase in uptake of government transactional services, taking an average of two approaches using government data to calculate the monetary value of efficiency savings.</p>
NHS: Benefits to the public purse from reduced GP visits	<p>Annual saving of £20 million for each group of 508 thousand people who are trained each year from reduced GP appointments due to people receiving digital skills support for health and wellbeing. Cumulative saving of £899 million.</p> <p>The NHS Long Term Plan (2019) and Digital Health and Social Care Plan (2022) aim for more people to choose to use digital to access services and manage conditions. The calculation is based on findings from NHS Widening Digital Participation programme delivered by Good Things Foundation. Cebr then applies data and research from other sources to calculate total benefits.</p>
Tax Revenue: Benefits to the public purse from more tax revenue	<p>Annual increased revenue starting at £10.6 million in 2023. Cumulative benefit of £483 million.</p> <p>Cebr sums the increases in government tax revenue deducted from other benefits streams: employment (unemployed people finding work); earnings (employed people increasing earnings); plus decreases in jobseeker allowance payments (for those previously unemployed).</p>
Employment: Benefits to people from gaining work	<p>Annual earnings from finding work starting at £3.7 million in 2023. Cumulative benefit of £179 million.</p> <p>Basic digital skills are essential for seeking and finding work. Cebr estimates the number in the target group likely to be unemployed and to find work as a result of gaining basic digital skills. Earnings are calculated using the lowest earnings quartile (Annual Survey of Hours and Wages) and then removing money paid in taxes and national insurance (which is counted elsewhere).</p>
Corporate: Benefits to companies from filling vacancies	<p>Annual savings starting at £46 million. Cumulative savings of £2,719 million.</p> <p>Basic digital skills have become even more important in the workplace. Cebr used the latest ONS labour market data (on industry vacancies, disability and employment, hours and earnings) and PWC Employers Skills Survey data to calculate the benefits of filling basic digital skills vacancies.</p>
Earnings: Benefits to people already in work from higher earnings	<p>Annual increased earnings starting at £13.1 million in 2023. Cumulative benefit of £586 million.</p> <p>For people already working, basic digital skills are necessary to progress and earn more. Cebr estimates 33,200 people in the target group each year will be employed. Cebr calculates their increased earnings from gaining basic digital skills, deducting tax and national insurance.</p>
Time savings: Value of time saved using online services	<p>Annual value starting at £83.9 million in 2023. Cumulative value of £3,906 million.</p> <p>Using government measures to value leisure time and an in-house macro-economic model, Cebr estimates that each target group of 508,000 people receiving support will save 15.4 million hours at a value of £83.9 million from doing half of their government and banking transactions online.</p>
Retail transactions: Money saved using online shopping	<p>Annual saving starting at £77.5 million in 2023. Cumulative saving of £3,480 million.</p> <p>Cebr uses data from UK Consumer Digital Index (Lloyds Banking Group) and ONS Household Expenditure Survey (pre-pandemic to minimise risks of outlier data) to calculate the average amount saved per person assuming a 50% uptake of better deals online (£258.31 each year).</p>
Environment: Benefits from net reduction in CO2 emissions	<p>Annual monetary benefit starting at £1.6 million in 2023 from net reduction in CO2 emissions from reduced commuting. Cumulative benefit of £76 million.</p> <p>Cebr estimates reduced CO2 emissions likely to result from a subset: 33,200 employed people each year, for whom gaining digital skills enables them to work from home for some of their hours. This is offset against increased CO2 emissions from unemployed people likely to gain work.</p>

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- World Skills UK (2021), Disconnected: Exploring the digital skills gap.
- Yates, S et al (2021), Me and My Big Data final report.

Toolkits, guides and lessons learned reports

[Digital Exclusion Risk Index tool](#): A dataset and tool to explore the risk of digital exclusion across England, Scotland and Wales. (Developed by Greater Manchester Combined Authority building on work by Salford Council, launched in 2021).

[Digital Inclusion: A Roadmap for Combined Authorities](#). Good Things Foundation with Capita (2021)

[Doing Digital in Later Life](#): a practical guide for supporting over 75s to access digital inclusion. Good Things Foundation for Greater Manchester Combined Authority (2022)

[Digital Skills for Employability Playbook](#). Good Things Foundation supported by partners (Accenture, JP Morgan Chase Foundation, Enterprise Blueprints, Yorkshire Building Society) (2022)

[Digital Inclusion in Health and Care](#): Lessons learned from NHS Widening Digital Participation programme. Good Things Foundation (2020)

[Digital Inclusion Toolkit](#): Digital inclusion advice for councils, by councils. Local Government Association with Leeds City Council and Croydon City Council (2021)

[Mapping Digital Exclusion Toolkit](#). LOTI London Office for Technology and Innovation (2021)

[Minimum Digital Living Standards project](#): Developing a new benchmark (Briefing paper 2022).

[Social Tariffs Toolkit](#). LOTI London Office for Technology and Innovation (2022)

[Supporting People with Data Connectivity \(broadband and mobile data\)](#). Good Things Foundation and People Know How (2022)

[Place-based collaboration for digital inclusion](#). Good Things Foundation supported by JP Morgan Chase Foundation. (2021)

With thanks to: