

Heseltine Institute for Public Policy, Practice and Place

THE CASE FOR SOCIAL BROADBAND: PEOPLE AND COMMUNITIES

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Executive Summary

In this second report we concentrate our attention on people and communities, maintaining our focus on the social aspects of digital inclusion. We use the data from our survey, secondary research from organisations such as the Good Things Foundation, Lloyds Bank and the ONS, and include interviews with local stakeholders. The discussion centres on skills, health and community.

The main points from this report are summarised as follows.

- The survey neighbourhood can be categorised as a high user, low socio-economically engaged community. However, the use we see is based on a set of skills that enables consumption although fails to develop the productive capability of the individual.
- We see a cycle of online consumption that falls short of productive digital activity and fails to build the human capital of the individual. It limits the social capital of the community and restricts the economic capital and wealth building of the wider local economy.
- While individuals are competent online consumers, there remains a lack of digital skills that can allow greater access to better jobs. These skills matter because they can help this community to transform into one that is digitally civically engaged and able to take up better socioeconomic opportunities.
- With the above in mind, four important questions remain to be considered:
 - First is the question of the cost of technology and whether this is a barrier to improved levels of use.
 - Second concerns the capability of the user and how this might enable or limit digital inclusion.
 - Third, related, is whether competence and motivation act as barriers to using the internet and prevent ways that can improve socioeconomic outcomes.
 - Finally, a fourth question refers to the types and levels of support needed to make connection easier and to improve the quality of use across the community.
- Digital skills in the wider city region remain a conundrum for policy makers and practitioners. Access and use is often considered not to be enough as the local economy requires a level of digital skills that a proportion of residents in the city region lack.

- There is an economic impact to be gained from upgrading digital skills. In our resident community, we can estimate as follows:
 - The cost of raising skills to a basic level across the community is in the region of £136,000. This cost is disproportionate as the hardest to reach tend to cost more to train than those who exhibit any digital skills.
 - Nevertheless, if the skills base of the community can be raised, a net economic benefit of some £1.6 million across the community in enhanced earnings and online savings, per annum, can be achieved.
- If this was to be applied across the wider Knowsley borough, the economic benefits from an upgrade in digital skills would be estimated at somewhere in the region of £25,000,000.
- Poor health and disability pervades Knowsley.
 This makes it an opportune borough for digital health innovation, although this would need to be accompanied by a concentrated focus on community-linked social innovation and trust building.
- An estimate of costs to the NHS based on faceto-face doctor appointments in the survey community suggests that over £60,000 per annum could be saved if these were reduced through an enhancement in user digital skills.
- By building social capital in the survey community, community resilience and confidence can be developed. This can help develop digital skills in socially innovative ways. Institutions such as One Knowsley, can aid in this process.
- We set out an eighteen-point response to the four initial questions that provide the basis for an action plan. These seek to address barriers to improving the conditions of residents and cover technology costs, competence, types of training and support for community-based development.

1. About this Report

This is the second report based on work that looked specifically at residents in Knowsley who suffer from digital exclusion and digital poverty. The work was commissioned to consider how a case for social broadband could be made. A main concern was the persistence of poor life chances related to wider matters of deprivation that affected residents. However, in our first report we found that residents felt they were competent users of the technologies, engaged with online services regularly and although cost was a concern, in general it did not prevent connectivity.

Our original hypothesis based on device, affordability and skills seemed to be an inadequate starting point from which to understand digital poverty in Knowsley. A more nuanced understanding was required and we based this view on the following two points.

- Being digitally included is not simply about competence, the technology and the price, all of which remain relevant. As we demonstrated in our previous report, if the measurement or standard of digital inclusion is based on the above hypothesis, then this is met in terms of digital consumption. However, as we show in this report, the standards of being digitally included in terms of productive outcomes for individuals and communities, and empowered citizenship is yet to be reached.
- Second, there are many people who are situated in a comfortable mid-band of basic skills that allow broadband use. This is a level of skills that enables consumption although limits productive use in the sense of economic enhancement and wider citizenship engagement. It leads to a set of basic skills that are short on broader and deeper specific employability skills, and leads to a sub-group who are wholly excluded. Those excluded are the elderly and disadvantaged groups who require specific attention to even reach the basic level of skills needed for transacting and consuming online.

This work aimed to consider whether a case for social broadband could be made. It was initially to focus on cost, provision of technology and skills as a barrier to digital inclusion. Yet this hypothesis has proven too blunt an instrument to advance the case for social broadband. Rather, the experiences of low income indicate that there are other needs to be met first, and there are broader questions about building community capacity to be considered prior to developing solutions to digital poverty. As part of this, we need to make an argument for a change in type of use across a community such as that in our survey population. Thus, the starting point in the current report is a focus on the digitally enabled consumers outlined previously. They have the skills to consume all manner of privately provided online provision – although they are not digitally productive or digitally empowered citizens, which in turn leads to greater levels of precarious employment, poorer lifestyles and reduced life chances. This is what a high use, low socio-economically engaged community looks like. As we concluded the first report, we were left with four questions to help change the type of internet use across the community and thereby impact on residents' socio-economic standing.

The intention here is to look at these in more detail and offer insight from the qualitative research undertaken as the project developed. The report also draws on secondary data produced elsewhere. We have focused this report on people and communities, bringing into the discussion ideas about skills, health and community resilience. We begin by reminding ourselves of the user type evident in our community before looking at perspectives on skills. At this point we introduce the wider Liverpool City Region context before we give a detailed section (3.2), where we look at the potential economic impact should digital skills be enhanced in our Knowsley community.

Our attention to health and communities takes a two-pronged approach. On the one hand, we see health as an indicator of deprivation although it is a sector ripe for healthcare innovation. We consider whether there are simple 'wins' to be sought in this field. Our attention on community is about exploring how the community we examined, as a representative of many similar across the borough, has the capacity to respond to digital exclusion and socio-economic disadvantage, and where points of intervention can be made. We finish the report with a response to the four questions that we hope can provide a basis for further action.

2. User Type

The idea of different types of use is well-established in reviews of broadband connection. Type of use can indicate a value to be extracted from the internet by individual households as the community reaches a saturation point of use.1 Figure 1 is a simple cellbased schematic showing how, when users can travel towards the right-hand side of the diagram, better quality outcomes in their use of broadband connection can be expected. That is, when the type of use moves towards the top right hand corner of the schema we would expect greater levels of use to be associated with higher levels of socio-economic engagement. This would be productive internet use and would differ from use based solely on consumption. The obvious cause and effect at this moment would be higher and better quality use of broadband and higher and better quality options in day-to-day life, including employment, education, engagement with public services, consumption and so on.

Our resident area did not show signs of low internet use although did show signs of low socio-economic engagement and opportunity. As explained in the first report, we do not regard this community as e-Withdrawn and in the idealised diagram above, our community would sit in the top left hand corner representing an aggregate of households who are generally high internet users although low in socioeconomic engagement. We can interpret from our results shown in the first report, that high internet use based on consuming privately provided online services, that are transaction based, can easily coexist alongside lower levels of socio-economic engagement and opportunity. The first report also evidenced lower levels of access to public services and educational services.

If we accept that high internet use should be positively associated with high socio-economic engagement and opportunity, then it leaves us with the question of how do we move residents of Knowsley away from the cells on the left-hand side of the diagram and towards the top right hand corner cell? Or in other words, how do we get users to consume *and* produce through their digital engagement? The four questions we posed previously can now be examined in more detail.

Question 1: Is cost a barrier to using the internet in ways that can improve socio-economic outcomes?

We believe that access to the technology is not a

Figure 1 General types of broadband use



problem on its own. In this regard, residents have met a minimum digital standard albeit centred around the consumption of privately provided online servcies. However, cost remains a critically important factor and the proportion of expenditure on internet access is a problem of disproportionate spend for low-income households. On its own cost is not a barrier to typical consumption-led use although it is and will remain a barrier to helping residents reach new types of use and in turn, experience new forms of benefit. The mobile phone, smart TV and games console is used as the choice of connection.

Question 2: Is user capability a barrier to using the internet in ways that can improve socio-economic outcomes?

Residents appear capable of connecting to the internet from home and do so with a degree of confidence, having a regular means of connection. Their use of the internet is mainly to access commercial services, mostly retail and entertainment driven and provided by the private sector. The services are often delivered as part of a 'bundle' of technologies and content and tend not to drive enhancements to individual human capital.

Question 3: Is motivation and competence a barrier to using the internet in ways that can improve socio-economic outcomes?

Residents regard themselves as competent users

Examples include: Barbosa Neves, B., Fonseca, J.R.S., Amaro, F. and Pasqualotti, A. (2018) Social capital and Internet use in an age-comparative perspective with a focus on later life, PLoS ONE, 13 (2): e0192119. <u>https://doi.org/10.1371/journal.pone.0192119</u>; van Deursen, Alexander and Helsper, Ellen (2015) A nuanced understanding of Internet use and non-use amongst older adults, European Journal of Communication, ISSN 0267-3231 DOI: 10.1177/0267323115578059; and Nicole Zillien, N. and Hargittai, E. (2009) Digital Distinction: Status-Specific Types of Internet Usage, Social Science Quarterly, 90 (2), pp. 274-291.

and their familiarity with common connection routes mean they are regularly online, although most would not regard themselves as excessive users. They see their competence as necessary for what they wish to do on the internet and are motivated to connect with and use the internet for this purpose. However, we also found instances of trepidation that could affect motivation, individual concerns that manifest for instance in a reluctance to use public WiFi provision. Levels of competence do not simply match on to an equivalent formal qualification or to workplace skills, both of which can change labour market opportunity. Greater levels of digital literacy would need to build up knowledge and confidence in different ways, from an informal style to a more work-related approach.

Question 4: Are there forms of support not currently in place that can make connection easier, prove to be of greater value and help improve socioeconomic outcomes?

Residents are competent and connected users, although they do not use the internet in ways that can transform their socio-economic circumstances. Our results indicate the quality of a connected experience is not what it could be and there are instances of some users being forced into online transactions, particularly around accessing benefits. There is also a proportion of non-users who are digitally excluded. Social innovation in the form of broadband and internet support is limited in Knowsley, despite the borough having a long history of community-based initiatives in other fields, and a developed institutional architecture in the voluntary, community and social sectors. There is latent support for policies and programmes that can support digital inclusion.

3. Digital Skills

The Lloyds Bank survey of digital skills has suggested that around 11 million people lack essential digital life skills. They suggest that over a third of the workforce, almost 12 million people at work, lack the essential digital work skills.² A common feature amongst those lacking in these basic digital skills in work are older workers, those working part-time, those who lack formal qualifications and those in the service sector. In other words, those who are precariously employed.

As the Good Things Foundation have noted, while the digital divide may have narrowed, it appears to have deepened and the lack of skills is a causal factor.³ The informative work by the Centre for Economics and Business Research (CEBR) argues that enhanced digital skills facilitate reduced online expenditure, diminishes unproductive time, enables more flexible working and increases the capacity to earn more.⁴ The CEBR suggest that over the next ten years 5.8 million people need to be trained to a basic digital level to overcome digital exclusion. They calculate the approximate cost to provide this training at £1.4 billion although importantly, the return to the economy from an additional half million people with basic digital skills would reach £13.6 billion. Their work implies that for every £1 invested into supporting those without digital skills to achieve the level of essential life skills that Lloyds Bank suggest, would in turn generate £9.48 into the UK economy.5

These figures are estimates and the population needing digital skills are hard to reach. They do however show, despite the complexity, how if we can enable broadband across communities, the potential impact from reaching those who have little or no formal digital skills could be a substantive effect on their lives. It would be transformative. Not only is this relevant to our community in Knowsley, it is because they do not regard themselves as without essential digital skills that their digital experience is relevant to how we provide training and education in the future. What training they have previously been exposed to, if any, has not produced the type of use that would bring to them the most benefit.

3.1 Liverpool City Region and the digital skills conundrum

Notwithstanding its focus on a hard spine of technology, the Liverpool City Region Combined Authority (LCRCA) and Metro Mayor have consistently raised digital access as a pervasive and cross-cutting strategic theme for the local economy.⁶ Often, we see reported business owners and managers lamenting the deficiency in the local workforce when it comes to digital skills.⁷ However, in a pre-pandemic report for the Northern Powerhouse, the IPPR North argued how the fragmented provision of digital skills training meant a lack of business involvement with suppliers in coproducing learning packages and this contributes to the digital skills gap.8

Theme Six is the final category in the Combined Authority's Digital Strategy, 2021-2023 and is devoted to digital inclusion.9 It is noted in the strategy, which has a strong focus on the technologies, that "physical coverage is far from the most significant barrier to digital inclusion in the city region" adding how "[0] vercoming cost, skill and attitudinal factors appear to be the keys to moving those currently excluded online and increasing the use of digital technology by those whose use is currently limited."¹⁰ The wider problems of poverty were cited as contributory factors to digital exclusion in the city region during our interviews, with a nod to the obvious cycle of deprivation that blights the city region.

"Where you find deprivation, you'll find digital deprivation... if you don't have the affordability to access internet, or mobile broadband or have the kit to use it, and then not having those skills levels... and that skills and education is linked to the wider deprivation in terms of overall education, in terms of the postcode lottery you get in terms of schools and the provision that's on offer."

The response from the Combined Authority is an action plan that seeks to make digital inclusion extensive

- LCR Digital Strategy (undated). LCR Digital Strategy (undated), p.32. 10
- Research interview (RI), December 2022. 11

Lloyds Bank (2021) Essential Digital Skills Report 2021, Third Edition. Available: https://www.lloydsbank.com/banking-with-us/whats-happen-2 ing/consumer-digital-index.html

³ Good Things Foundation (2022) Let's Fix The Digital Divide - for Good Good Things Foundation Strategy 2022 - 2025. Available: https://www. goodthingsfoundation.org/digital-nation-2022-sources/

CEBR (2022) The economic impact of digital inclusion in the UK - A report for Good Things Foundation, Centre for Economics and Business 4 Research, July. Available: https://www.goodthingsfoundation.org/insights/the-economic-impact-of-digital-inclusion-in-the-uk/ Op Cit. CEBR (2022), Lloyds Bank (2021).

See LCR Digital Strategy (undated). Available: https://www.liverpoolcityregion-ca.gov.uk/digitalstrategy/

Liverpool City Region Combined Authority (undated) Skills for Growth Action Plan Digital and Creative 2018 - 2020. Available: https://www. 7 liverpoolcityregion-ca.gov.uk/wp-content/uploads/LCRCA_DIGITAL_AP.pdf

⁸ Blakeley, G. (2017) Devo Digital Digital Skills for the Northern Powerhouse, IPPR North.

across its policies and processes. Alongside this there are proposals to partner closely with Registered Social Landlords and the NHS to address digital exclusion, look for savings through enhanced digitisation of public services, consider initiatives that provide free technology and possibly broadband connection, and ensure basic digital training for all in the city region.¹² However, the lack of ambition seen in the digital inclusion theme is likely to reflect the limitations placed on the Combined Authority through devolution, particularly its restricted budget.

The perception from the Combined Authority is that digital skills are entwined with wider questions of education and deprivation in the city region. Connectivity is defined through skills, motivation, and basic education that can enable access with the confidence of doing so safely and securely. Work related skills are essential although too often deficient. In a conversation with representatives from the Combined Authority the following points were made:

"... from speaking to other employers... there's a massive lack in being able to use Excel. That's probably one of the biggest things, but that goes hand in hand with having a few maths skills... a lot of the courses that go on, they don't go into that in a lot of depth... it's not easy to teach Excel to people who haven't got maths skills."13

From this point, concerns about educational standards follow. Our interviewees at the Combined Authority were keen to stress that increased educational attainment across the city region would lead to higher level digital skills and then expressed some disquiet about current levels of digital skills and a more automated future work environment; it was considered a problem to ensure a match between the demands from tomorrow's employers and the skills and education being supplied.

The restrictions placed on the type of technology used was also recognised. This, as we have pointed out earlier in our first report, is important as we see how connection is made through a low-level entry point, such as a mobile phone or smart TV. Our interviewees did not see this as a positive sign of connectivity, but as a restricted level of engagement. While through this media many websites are accessible, working on software that provides digital solutions, such as word processing or data management, is much different. These are more difficult skills to attain and importantly, are regarded by officials and prospective employers to be skills that enhance productivity of firms and the city region.

One of our interviewees reflected on how this demarcates consumption and production activities and articulated a clear frustration about the lack of useful skills seen by young people.

"Everyone makes the assumption now that all kids know how to use a computer. They're all over it... Well they know how to use it for a load of nonsense and how to watch YouTube all day, and go on social media, and maybe send an e-mail in pigeon English or text speak. But there's loads of them if you asked them to type you a letter, they couldn't type you a letter. They couldn't get Excel to add two cells together... don't get me wrong, there's loads who could, but there's loads who couldn't."⁴

The insinuation is clear; access alone is not the goal and digital inclusion must mean attainment of a level of skills that mean productive work is an outcome. Netflix and TikTok are irrelevant in comparison to Microsoft Office.

It presents a conundrum for the city region that national or local policy makers have failed to adequately address. The costs of access are overcome by residents who are motivated to connect by the desire to consume online leisure, entertainment and retail. As these markets develop, residents are willing to spend a disproportionate amount of their total income on connection, and this includes an initial outlay on hardware costs and continued outlay on software applications for consumption. In turn, their online behaviour leads to a high user type and builds up levels of competence from which private sector organisations can sell more of their services and goods, trade and build revenues. Yet this circle of online consumption falls short of productive digital activities that can develop the human capital of the individual resident, the social capital of the community and economic capital and wealth building of the wider local economy.

3.2 The economics of a digitally skilled Knowsley community

This dilemma is at the heart of any attempt to transform a community such as is our focus in Knowsley. Drawing on a variety of information sources we can create data points to indicate a value from enhancing the skills base of those in our community. We can then consider such a value across similar communities in Knowsley. The data sources for this purpose include our survey, ONS data on Knowsley, data provided by the Lloyds Bank digital skills survey, and the calculations made by CEBR to estimate values of enhanced digital skills.¹⁵ These figures may be used as an indicative economic justification for why a digital skills intervention can be used to transform a community into a high use, high socio-economic engaged community.

We can profile the community based on a range of variables. These include: the cost of upgrading the digital skills base of the community; the savings

¹² Liverpool City Region Combined Authority (undated), 2021-2023 LCR Digital Strategy Action Plan. Available: https://www.liverpoolcityregion-ca. gov.uk/digitalstrategy/ 13

RI, December 2022.

RI, December 2022. 14

We are using for this section our own survey, CEBR (2022), the Nomis labour market profile available at https://www.nomisweb.co.uk and Lloyds Bank Essential Digital Skills Data Tables, available: https://www.lloydsbank.com/banking-with-us/whats-happening/consumer-digital-index/essential-digital-skills.html

in monetary terms from using online services, and enhanced employment opportunities that bring an increase in income. In other words, we can estimate a cost of moving users towards a higher level of socioeconomic engagement through a shift in the quality of their digital use and we can then look at the rewards to individual community members for making that shift. To do this, we need to find an estimated set of figures that rest on data points from various data sources.

The measurement of digital skills is often based on informal assumptions made by the observer. This lies at the heart of our earlier commentary from an interviewee about ability to manipulate some online activity and inability to use more functional software, like Excel. Nevertheless, the work by Lloyds Bank on what they deem are essential digital skills is useful for this purpose. Their work initially categorise skills into four skill sets: No Foundation skills, Partial Foundation skills, Foundation Level skills and above Foundation Level skills. They assess these skills based on an ability to complete all or a proportion of, eight basic tasks from switching on a device, to changing a password and using the internet.¹⁶ The first assumption we make is to map the Lloyds Bank categories on to those competencies indicated by our survey respondents.

Figure 2 Lloyds essential skills mapped on to survey competence

Lloyds Essential Skills	Survey Competence	% of survey population
Foundation Level plus	Very Competent	34
Foundation Level	Competent	32
Partial Foundational Level	Average	23
No Foundational Skills	Still Learning	11

This provides an indication of the proportion of people in our survey community who we believe are not at a foundational level of use. Figure 2 shows 11% of our residents with the lowest category skills and 23% see themselves with average competence. In comparison, the Lloyds Bank work indicates that 19% of the population to be at partial or no foundational level. The Lloyds Bank result include non-internet users, whereas our numbers above do not. The initial indication therefore is that around 33% of our community population need support to develop their connectivity skills to a transformational level that we suggest is required.

In their analysis of the economic impact of digital inclusion CEBR use the figure of almost 11 million people in the UK without basic digital skills.¹⁷ They suggest this can be addressed over a ten-year period and importantly, they group the proportions of those who

Figure 3 Estimate of survey area selected demographics

Survey Area	Estimate number
Population	~ 10,000
Working age	6,600
Aged over 65 years	1,500
Aged under 16 years	1,900
Total working age and 65 years plus	8,100

would organically develop such skills in contrast to those who need intervention. CEBR argue that over a decade 981,000 people per annum can become digitally included, and that 52% of these will need intervention each year. Their figures show that each year 508,000 people will need some form of skills development, while 474,000 will develop their skills organically. This leaves around a quarter of a million people without necessary skills by 2032. Critically important in their analysis is their comment that 85% of this group is aged over 65.

These figures along with official statistics from the ONS, help us to construct an initial profile to examine the economic impact of transforming the user base of our community and this is shown in Figure 3. In our survey area, we estimate 8,100 people would fall into the assessment of population having or needing skills for digital inclusion.

The CEBR analysis allows us to look at the costs and potential benefits of upgrading digital skills. We look now at five areas: the costs of training, the savings to be achieved by those people who undertake retail transactions, the savings from those who undertake banking and public and services transactions and the increase in earnings from those not in work who upgrade digital skills and access employment, or who are already in work and increase their earning because of their upgraded skills. CEBR make the following assumptions in this analysis.

- Costs of upgrading skills to and above foundation level - operational costs, capital costs including the proximity of specific physical hubs, and user costs including the type of technology used.
- Retail savings savings accrue through less spending on travel and consumption while shopping, and on securing better prices through comparison sites.
- Banking and public and services savings savings accrue through reduced time spent on what previously would have been face-to-face or telephone based transactions.
- Unemployed accessing work income is
 increased through access to labour markets that

¹⁶ In general, we can assume that those who use the technology regularly have reached a certain level and it is those non-users who are hardest to reach. An explanation of the full list of tasks can be found in the *Lloyds Bank Essential Digital Skills 2022: Technical Notes.* Available: <u>https://www.lloydsbank.com/banking-with-us/whats-happening/consumer-digital-index/essential-digital-skills.html</u>

¹⁷ CEBR (2022).

are broadened through a wider variety of roles attainable and a wider variety of jobs advertised and accessed online.

 In-work enhanced earnings – enhanced earnings accrue due to increased worker productivity and the increased capability to move into higher paid roles or new employment.

Based on these assumptions, CEBR calculate the costs, savings and enhanced earnings in each of the five areas across a ten-year period. These are shown for 2023 in Figure 4.

Figure 4 2023 costs, savings and earnings calculated by CEBR

Type of impact	How impact translates into costs, savings or earnings
Provision of upgrading skills	Cost in the range of £49- £434 per person, with an average estimated cost for a 'non-disabled' learner at £74.71.
Online retail savings	Online purchases save on average £258.31 per person in a single year.
Online banking and public service transactions	Up to 30.4 hours per person, per annum, translating into £5.45 per hour.
Unemployed accessing work	After tax, an estimated £860.47 per person in a single year.
In-work with enhanced job role	A 2.8% uplift in hourly wage from £15.02 for full time employed

These calculations enable us to estimate the costs of supported skills development in our community. We take into account savings based on online transactions for those who have yet to reach foundational skill level and looks at earnings growth for those both in and out of work. However, further consideration about the wider population in the

Figure 5 Mapping age categories of skills upgrading

community and the strata of population requiring intervention can provide more accuracy to our estimates. For this reason, we map our age category on to the CEBR age categories and then estimate a mid-point cost, as we show in Figure 5.

From the CEBR work we see the non-disabled cost points for upgrading skills to the foundation level or above. We then map this across to our survey data to show the costs of for each age category that we have data on. This gives us a breakdown with a specific number calculated for each age and includes all members of the community aged 16 year's and above, whether internet users or not. The next step is to use the CEBR breakdown of those who require support and apply this to our community. This is shown in Figure 6.

Figure 6 **Y1 number and costs of those requiring digital skills support**

Age category	% who need support	No. who need support	Estimated costs
16-24	1.6	13	£611
25-40	4.7	132	£7,868
41-65	8.6	271	£19,272
65 year's plus	85.1	1,153	£107,839
Total	100.0	1,568	£135,590

Figure 6 provides a useful indicator of the costs needed to support a shift in user type in our survey community. Using the CEBR approach, it indicates how the biggest impact can be achieved by a focus on the older aged and where the least skills are evident. Overall, this is a focus on those hardest to reach yet who can bring a highest return (on investment). An investment just short of £30,000 could upgrade the digital skills of over 400 people of working age in our community. Whereas for a cost of over £100,000, 1,100 residents aged 65 years or over, can overcome digital exclusion.

CEBR age categories		Survey age categories and cost estimate			
Non-disabled age	Cost point	Age	% people	No. people	Cost point
16-24	£48.59	16-24	9.7	786	£48.59
25-34	£58.6	25-40	34.7	2,811	£59.56
35-44	£60.52	41-65	38.9	3,151	£71.12
45-54	£77.02	65 year's plus	16.7	1,353	£93.57
55-64	£82.68	Total	100.0	8,100	
64-74	£93.59				
75 plus	£116.02				
Average	£76.71]			

These figures, based on the estimates given by CEBR for one year, assumes a general uplift of skills. The CEBR report that skills development would become cumulative over a ten-year period as roughly 20% of those needing a skills intervention are supported each year. The effect of such an accumulation of skills development is critical as it would form the basis of helping to move a community into high user, higher socio-economic engagement. The costs as an investment into our survey community, can be compared to the benefits gained as community members connectivity and use is qualitatively enhanced. That is, if we move the skills base from being predominantly focused on transaction and consumption and towards economically productive skills with digitally enhanced citizens. We can use the numbers shown in Figure 3 and in Figure 4 to estimate those benefits and this is presented next in Figure 7.

Figure 7 Selected benefits from upgrading digital skills in the survey community

	Per person, per annum	Community aggregated
Online retail savings	£258.31	£405,069
Online banking and public services savings	£165.68	£259,811
Increased earnings for those out of work	£860.47	£63,419
Increased earnings for those in work	£858.00	£1,048,125
Total		£1,776,424

The total affect translated into monetary benefit over a year is on the assumption of people taking up training and those new skills being deployed. It is then assumed that the benefits are aggregated across those who skills have been upgraded: all who upgrade their skills access online retail savings, all access online banking and public service savings; the proportion of registered unemployed, at just under 5% in Knowsley, receive training and the proportion of economically active, 78% for Knowsley, are included. The potential benefit therefore would be calculated by the potential gross benefit of $\pounds1,776,424$ minus the costs of upgrading skills at $\pounds135,590$. This would mean a potential net benefit of $\pounds1,640,834$ for this community.

This is an idealised figure of net benefit to a lowincome community from upgrading digital skills. It assumes the training would be appropriate, that all would learn and all would apply those skills in the areas we have noted. Then all without employment would gain employment and all in-work would see their roles and earnings enhanced. It assumes that a focus on the over 65's raise the general level of skills because of the other age groups benefiting from organically raising their skills' levels. Nevertheless, if such a figure were to be applied across the community it would assume a net benefit close to £1,050 per head if based on the population above 16 years old. This idealised figure should be seen as such, as a qualitative aspiration rather than an empirical level of economic impact.

4. Health and Communities

We turn now to a brief consideration of digital inclusion relating to health and communities. We know health is an indicator of deprivation in communities such as our survey area, while we are also aware that there is an increasing supply of health innovation in this field. We suggest that simple 'wins' can be achieved that bring efficiency savings and improved services, although to achieve this we need to change types of broadband use. The basis for trust building with

residents needs to overcome institutional and resident skepticism by focusing on the relationships between institutions, agencies and residents. Investment into the social capital of communities to enable new forms of intervention that support the development of the online user is needed. income communities suffer from poorer objective conditions, whether that be pension income, access to employment or poorer health. This is the context of connectivity for our community. The call from the Good Things Foundation to recognise digital access and digital skills as an important determinant of health then, is pertinent as the association appears to be well founded.¹⁹ It is a principle that is consistent with the

Figure 8 Health deprivation in our community and wider Knowsley borough



4.1 Health

Digital inclusion in health can cover a wide range of health innovations that includes the pharmaceutical sector, life sciences, data management and ideas about e-health. The latter might cover anything from technology-led telemedicine to forms of online social proscribing. We look at health in this report because firstly, it is a critical area of concern within our community and secondly, digital inclusion is equally recognised as a way to support mental and physical wellbeing, poor health prevention, better forms of self-care and appropriate and efficient use of resources.¹⁸

In our community, cardiovascular, cancer and respiratory disease are health problems that are above the average for Knowsley. These compound the problems of long-term illness in the working age population in general and concerns about certain groups, such as older men isolated in communities. Figure 8 reinforces the points made throughout the first report concerning the objective experiences of a low-income community seen in this instance through the concentration of health deprivation in our survey community and more generally across Knowsley.

The patterns are quite clear. Low-

¹⁸ See for example, the perspective from the NHS and their website Digital inclusion for health and social care, available: <u>https://digital.nhs.uk/about-nhs-digital/corporate-information-and-documents/digital-inclusion</u>

¹⁹ Stone, E., Nuckley, P. and Shapiro, R. (2020) Digital Inclusion in Health and Care: Lessons learned from the NHS Widening Digital Participation Programme (2017-2020), September, The Good Things Foundation. Available: <u>https://digital-health-lab.org</u>

eight Marmot principles that promotes universal health care. $^{\scriptscriptstyle 20}$

Typical areas in which we might see digital health interventions could include: patient-centred technologies that increase access and reduce patient anxiety in accessing healthcare; online portals that aid assisted and independent living; operational efficiencies that reduce response time by clinicians and professionals to patients; big data, to aid research and development; and related to this, artificial intelligence (AI) and medical robotics. Development in drug production and cell therapies can be included. It becomes easy to see why the broader medical sector attracts attention – possibly at the expense of our starting point: patient-centred digital interventions and support.

While the experiences of our community with digital medical support was limited we did come across one resident who specifically made the point about this field. In this instance, a family member required dialysis and the link between monitoring the patient treatment at home and diagnosis to guide treatment including advice on diet was dependent on a stable broadband connection. It is these type of digital medical interventions that can have high impact in our community. Using the work of CEBR we can provide a monetary assessment of how simple changes that draw on connectivity can support residents and reduce costs to healthcare providers.

Using data from the NHS Widening Digital Participation (WDP) programme we can see a visible impact on health services consumption. The WDP estimated that when those who lack digital skills develop their capability, then in 33% of cases the number of faceto-face GP appointments were reduced by 4.8. That is, around five less appointments were made by those who had become digitally competent.²¹ By scaling up these results across age groups and by using an estimated cost of GP patient appointment, CEBR then estimated a saving to the NHS.

This estimate suggests that when a group of learners are able to upgrade their digital skills – in this case an annual cohort of 508,000 – then the NHS would save $\pounds 20$ million. As a starting point, we can apply this to our community to provide a rudimentary estimate of localised NHS savings. This is shown in Figure 9.

Using these figures, we can suggest that from digital skills intervention, over 7,500 GP appointments would be saved during the year in our community. This would bring over \pounds 61,000 in savings to local health services. While again this is an estimate, the implication is clear; there are savings for the physician or health manager from digital technologies centred on the user.

Part of the move towards this example of provision is overcoming the fear of losing health care. As one

Figure 9 NHS savings in our community based on digital skills upgrading

Number of reduced GP appointments per person due to enhanced digital skills	4.8
Estimated cost per appointment	£8.20
Savings per person, per annum of reduced appointments	£39.40
Estimated aggregated savings across the community	£61,700

of our interviewees noted, a campaign that seeks to include and encourage people to access medical services online can lead to angst amongst residents:

"... we're not making you do your GP appointment online because your GP doesn't want to see you anymore. It's for you and it's to save you money. It's to save you time. It's to save you energy." ²²

While there is no doubt good intent to support community members, there remains doubt that digital access can be exploited. In a comment similar to that on skills, one interviewee suggested that a stratum of people will never take up access, the so-called 'can't cook, won't cook group' of residents:

"We've got some people who it doesn't matter what you do, they're never going to access digital. We found out from our research that... You can offer somebody digital access, you can give them free internet, you can give them a piece of kit. They're still going to say 'no thanks'... somebody described them as the can't cook, won't cook group."²³

This view, we would suggest, is not constructive and places digital exclusion as the responsibility of the group concerned rather than asking why engagement is not higher or of a better quality. In some initiatives underway this was the case:

"We're remotely monitoring virtual wards. Instead of someone going into hospital they will be monitored at home virtually by digital tech. That's not going to work for someone who's digitally excluded because of the internet, because of skills, because of devices, because their motivation, because they just don't want to do it. Research tells us that, you know, some people just say 'No, I'm not doing that'. What they need to be offered is a non-digital alternative, so that project would work for them, so they won't be included within the scope of the virtual wards, but the virtual wards will go back to the GP and say, or the hospital and say, that person can't be monitored at home, give them a face-toface option."²⁴

Health professionals and the wider support practitioners are categorising users consistent with the

²⁰ See Marmot et al (2022) All Together Fairer Health Equity and the Social Determinants of Health in Cheshire and Merseyside, Institute of Health Equity, NHS Cheshire and Merseyside. Available: https://www.cheshireandmerseyside.nhs.uk/your-health/tackling-health-inequalities/#:-:tex-t=They%20are%20influenced%20heavily%20by%2C%20discrimination%2C%20and%20environmental%20sustainability

²¹ See CEBR (2022); Stone et al (2020).

²² RI, February 2023.

²³ RI, February 2023.

²⁴ RI, February 2023.

way research is indicating. They are aware of those with skills who have an appetite for more online transaction and interaction with health services, and those who could be persuaded to do more online. These perspectives show consistency between our research and with work on digital health inclusion. However, investment is needed to build up trust and relationships with marginalised groups, as Stone et al note.

"Trust, and the time to build relationships, featured highly as an ingredient for success, especially in supporting people with severe and multiple disadvantages. Trusted people could help to rebuild the relationship with health services, and mitigate the barriers to accessing online health services. Being supported by 'people like me' and 'in my language', and 'exploring together' also helped to build digital health literacy and confidence."²⁵

This is a lesson that goes beyond the provision of health services.

4.2 Communities and social capital

As we turn attention to communities, we suggest that investment into community social capital would also support relationship building with agencies and institutions in much the way argued for by Stone et al. It is our contention that we should aim to position communities so they can take advantage of any digital skills supply-side interventions that are advocated and that this can form the basis of a social broadband model. However, if an outcome of efforts to overcome digital poverty is simply that community members are faced with a wider range of low-value added employment opportunities, then the problems in those communities will continue. The better jobs need to be available. We look at two relevant aspects therefore, to show how community capacity can be developed and the types of intervention that might be considered.

One of the methodological problems we have encountered in this work is attempting to engage the community. However, this is more than a concern for researchers. Through the interaction of the place where our survey residents live, they construct an understanding of that place and develop their own individual identity. Symbols of meaning about their community and themselves are formed and residents see themselves as part of a community as well as being distinct individuals. What this dynamic does is it leads to some of the community acting in more collective ways to achieve a voice or enfranchisement. Alternatively, for others, when individualism is heightened then theoretically this can represent a form of freedom.²⁶

Yet we know that in our own city region, in practice the interaction between place and individual has taken a

pessimistic turn. According to one interviewee's view on Huyton communities:

"There's not a lot of direction in the people's lives, they are disengaged, they are completely demotivated or depressed... there needs to be a purpose to re-engage... something like a law centre, it offers opportunities for volunteering, offers opportunities for campaigns... and the campaigns are a way of generating that social capital as well, aren't they?"

Adding that what we see in Knowsley is

*"disengagement, to the point of being depressed and isolated."*²⁷

Attempts to address this are made from local community and voluntary groups, although Knowsley is under represented in terms of social enterprise and community business.28 To build up social capital, the conditions for informal networks need to be developed and structures to enable formal relationships between individuals and agencies that are based on trust, and recognised forms of collective activity encouraged. The voluntary sector provides some of this, such as specific places including food banks, while a community hub has been established at nearby King George V Playing Fields offering sports facilities. One Knowsley are an important organisation that can support community-based initiatives to help build social capital through establishing partnerships between community and voluntary organisations and local institutions. There is still work required to translate the efforts of local organisations into capacity building in these local communities. There are opportunities to learn from the experiences elsewhere in the city region and to draw on the institutional partnerships enabled by organisations like One Knowsley.

Local voluntary groups offer volunteer digital champions who can guide residents through basic introductions to the technology. They provide low-level basic provision that would meet the definition provided by Lloyds Bank of no skills or only part-foundation level skills. That an individual would attend such a dropin centre would indicate motivation and then careful support would build up confidence in user ability. Typically, these voluntary-based initiatives are held in community venues, including when possible public spaces like local libraries. However, this itself becomes a problem as one interviewee explained:

"What we have found out through a lot of our research, Googling and that, is that a lot of community centres don't have an IT suite. They'll do all sorts of other activities, but they haven't got an IT suite."²⁹

While as an informal approach, this offers a means

²⁵ Stone et al (2020), p.8.

²⁶ There are many studies of community and identity from different perspectives including classics such as Young, M. and Willmott, P. (1957) Family and Kinship in East London, Penguin: Harmondsworth; on the psychology of place, Glynn, T.J. (1981) Psychological sense of community: measurement and application, Human Relations, 34 (9): 789–818; and more recently on structural changes, Beyond, H. and Hudson, R. (2021) The Shadow of the Mine, Verso: London.

²⁷ RI, February 2023.

²⁸ Heap, H., Southern, A., & Thompson, M. (2017) The Scale, Scope and Value of the Liverpool City Region Social Economy, Heseltine Institute: University of Liverpool.

²⁹ RI, February 2023.

by which to build up trust, too many venues are not equipped or where public, are under increasing pressure to reduce their opening hours and in some instances, lacked the security needed for online transaction. To create a local community environment where digital provision becomes part of capacity building will take some concerted intervention.

Figure 10 Social broadband: responding to community-based digital needs

Response type	Focus of provision	Operational challenges
Market- based response	Relies on private providers At best, organic skills development Where undertaken, a focus on individual human capital	Driven by needs of private companies Cost is a household concern Lack of resident motivation to undertake training Security and safety
Public-based response	Top-down institutional provision Relies on public funding Uses formal public spaces May tend towards formal training Tends towards bureaucracy	Provision of technology Appropriate public spaces Constant tightening of budgets Lack of demand Security and safety
Community- linked response	Reliant on voluntary model unless able to sustain social enterprise form Social capital and trust building Enhances community identity Uses informal approaches such as a digital champion	Provision of technology Lack of finance Needs community capability Possible lack of demand Security and safety

Figure 10 provides an opening indication of how a social broadband model can be developed. This can occur through a market-based approach as we have at present, through a public approach and what we refer to as a community-linked approach. By community-linked we imply support from governance institutions and other agencies to facilitate a community-led response. This is not simply a 'bottom-

up' approach and instead is enabled through a forum such as a public-community partnership.

In practice, each of these approaches would overlap. Clearly there are financial constraints in the public sector, although the public sector can help change the value in use. The community we are concerned with is at a socio-economic disadvantage and any potential improvements to their socio-economic standing can only be achieved through a combination of initiatives, while any move towards a social broadband model should include a better quality of broadband use amongst residents. Ensuring the provision of the technology and access to enable a transformation in user ability will need an interplay of community and household, and of market, public and community sectors.

5. Better Outcomes

The context of our survey neighbourhood is one of lowincome. Our research demonstrates that internet use is pervasive across this neighbourhood and that simple assumptions about digital poverty and exclusion should not be casually mapped across to indicators of poverty. Despite in general experiencing low-income, our residents contribute to the profits of those private providers of technology and broadband. As we have seen, this comes at a considerable economic cost for individual households and much more than that for higher income households. While there are aspects of digital inclusion that we have not covered in detail here, particularly that relating to security, governance and democracy and importantly, digital poverty and disability, we have argued that the question of digital inclusion is more nuanced than the often-presented blunt hypothesis of skills deficit, a lack of technology and connection too costly.

We have also demonstrated in this report that there is an economic impact to be gained should we be able to change the type of use by residents. In this we do not seek to patronize those community members, but merely seek to point out that there are some actions that can affect savings and earnings. At the base of this is a level of support required to enable non-users and those users who are less skilled, to learn basic skills and to supplement this with opportunities for more formal training. As we indicate, there are savings to be made for public bodies should this be the case.

We conclude this report by returning to the four questions posed at the end of the first report and reproduced in section 2 of this report. As a reminder, these are focused on barriers to use and specifically costs, competence and motivation. Our fourth question was focused on support for the community. The points we make are directed towards changing the value of broadband use and is a precursor to understanding the potential to be had if a social broadband model can be developed. If we do no consider and address the eighteen points made here in Figure 11, then we may well change the way broadband is delivered, subsidised for example, but fail to change types of use that would in the longer-term, benefit residents.

Our eighteen-point response to the four questions we posed about how we transform user type can provide the starting point for an action plan to be implemented in our survey community. This community, like many in the Knowsley borough, requires intervention until it can build capacity that will see its members examine, reflect on and respond to the problems that exist, and which prevent greater levels of socio-economic benefits. The points we make require further discussion beyond our advisory team, to include a wider group of stakeholders. Before we head towards plans to develop social broadband, we must ensure the community is ready for action that would change their relationship with the technology. In return for a change in types of use, residents should not only be able to access a sustainable low or no-cost service, but play an active role in how such a response can be made.

We conclude this second report by emphasizing the following points. In general, we have a community that is not engaged enough in productive activity through their digital involvement. The dominant reason for use is to engage online in consumption activities. Because of this consumption-led user type, we can say that through the deployment of their digital skills, their life is always in some form of negative socio-economic balance. This might be objective in terms of low income and financial debt or more subjective in terms of lacking motivation, confidence or skills. There is little opportunity to turn this deficit into positive balance or a socio-economic 'profit'. This is an outcome of digital poverty and shows there is a link between the socioeconomic conditions a community experiences and the way that broadband is used.

Individuals who are unable to deploy their digital skills in ways to overcome this deficit are locked into a cycle of digital consumption. To address this, they require help to become digitally empowered citizens not only by providing new and better access to improved employment opportunities, but to enhanced digital engagement with public institutions through involvement in decision making and public accountability. Constraint on public finances cannot lead to public sector inertia on this matter. While enhanced digital connectivity can be achieved, bringing with it a minimum digital standard across communities and even allowing for better social and economic inclusion, this alone would not necessarily ensure a basic economic standard. Addressing digital poverty will go some way to addressing social and economic poverty, but will not be sufficient on its own to overcome this evil.

What are the barriers to better use?	What does the research tell us?	How do we achieve transformation?
Q1: Is cost a barrier to using the internet in ways that can improve	We believe that access to the technology is not a problem on its own. In this regard, residents have met a minimum digital standard. Cost remains a critically important factor and the proportion of expenditure on internet access is a problem of disproportionate expenditure for low-income households. On its own cost is not a barrier to typical consumption-led use although it is and will remain a barrier to helping residents reach new types of use and in turn, experience new forms of benefit. The mobile phone, smart TV and games console is the choice of connection	1. As a starting point for digital inclusion, incorporate the way that the mobile phone, smart TV and games console are used in any response.
socio-economic outcomes?		2. The current technologies and the content provided limit what users can achieve and restrict the opportunities for moving away from the consumption-led user type evident in our resident community.
		 3. Laptops and tablets are used less regularly for internet connection. Any attempt to involve residents in training should recognise how overcoming the 'technology gap' for instance between smart phone and laptop, can offer a transformative potential. 4. Rising costs and the proportion of household expenditure directed towards connection are a very valid concern. Subsidised or no-cost broadband is a powerful response to such concerns. 5. Use the estimated economic impact from
		transforming the quality of user type as the basis of a business case in addressing cost.
Q2. Is user capability a barrier to using the internet in ways that can improve socio- economic outcomes?	 Residents appear capable of connecting to the internet from home and do so with a degree of confidence, using a regular means of connection. Their use of the internet is mainly to access commercial services, mostly retail and entertainment driven and provided by the private sector. The services are often delivered as part of a 'bundle' of technology and content and tend to not offer enhancements to human capital. This consumption-led online activity is considered by officials to be limited in its ability to develop user skills. However, it is one that provides cost for the user and profit for the provider. 	 6. Residents need to be convinced that a benefit exists from developing their digital skills to enhance their productive capabilities. 7. Any type of intervention requires a focus on the human capital of residents as a starting point for changing their online user type. Providers of training and education need to consider new ways of delivering digital skills. 8. The basis for all training must be
		 pedagogically-led starting with understanding requirements for informal education and training and leading to formal, certificated training. 9. Scepticism by local institutions and agencies needs to be addressed during this process, realising that the current mode of connection and the current level of user skills is a positive starting point. 10. 'Smart' public services provided online need to appear less bureaucratic and more helpful and beneficial to residents, recognising that savings that can be made in this area.

What are the barriers to better use?	What does the research tell us?	How do we achieve transformation?
Q3. Is motivation and competence a barrier to using the internet in ways that can improve socio-economic outcomes?	Residents regard themselves as competent users and their familiarity with common connection routes means they are regularly online, although most would not regard themselves as excessive users. They see their competence as necessary for what they wish to do on the internet and are motivated to connect with and use the internet for this purpose. We also found instances of trepidation that could affect motivation. For example, for some there is a reluctance to use public WiFi provision and there were some concerns about online security. The level of competence in the community does not simply match on to an equivalent formal qualification or to workplace skills. To increase opportunities in the labour market through supply- side initiatives, greater levels of digital literacy would need to build up knowledge and confidence in different ways, from an informal	 11. Training – this is critical to achieve the development in human capital that will transform user type. 12. Content consumed is the motivation for being connected and does offer an entry point into a digital world. Users can learn that better skills can help them reduce costs and save money. 13. The focus on retail and leisure services brings a cost to the user. These services are not designed for productive purposes or to change the skills base of the user. However, training content can be provided through such services, for example on digital literacy, financial literacy, health, exercise and fitness. 14. Instead of telling (or asking) users to change their content, we must ask whether we can provide content that changes the outcomes for users. With this as a principle, we can move towards content that benefits our resident users by increasing their levels of competence.
Q4. Are there forms of support not currently in place that can make connection easier, prove to be of greater value and help improve socio- economic outcomes?	approach. Residents are relatively competent and connected users, although do not use the internet in ways that can transform their socio- economic circumstances. Our results indicate the quality of a connected experience is not what it could be and there are instances of some users being forced into online transactions, i.e. to claim benefits. There is also a proportion of non- users, those aged over 65 years, who are digitally excluded. Social innovation in the form of broadband and internet support is limited in Knowsley, despite the borough having a long history of community-based initiatives in other fields. There is a developed institutional architecture in the voluntary, community and social sectors in Knowsley and the wider city region that can be of help in the delivery of digital inclusion.	 15. Traditional forms of support to address digital exclusion including providing public spaces, have failed to change the circumstances of residents. Insist on new forms of training. 16. To enable both institution-led and bottom-up initiatives, community-linked, the conditions for community innovation is needed. This will help build community resilience, capacity and confidence building. Ideas about how these can be developed need to be aired and discussed further. 17. Connection to wider community groups and initiatives not related to employment (i.e. basic exercise, sport, leisure and mental wellbeing) could be the basis for public-community partnerships in this field. 18. Organisations such as One Knowsley may be able to aid in this area, while there may be other social innovation in the wider city region that can demonstrate how change can be sought.

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