

# Local communities and the internet ecosystem: Scaling solutions to data poverty in the UK

Data Poverty Lab  
Author: Kat Dixon  
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**NOMINET**

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# Foreword

**The Data Poverty Lab is imagining a world where everyone has the internet access they need.** In this world, anyone in the UK can pick up a phone, tablet or laptop and be connected. They don't start a video call with their GP and find out drops out mid-conversation. They don't walk to a friend's house to apply for jobs. They don't stand next to a chicken shop to check maps using the free WiFi. They have access to essential UK services. They connect with family and friends. They participate and thrive in our modern world.

**This report is a provocation.** It offers a snapshot of current and emergent ways of tackling data poverty, their pros and cons, and ways to scale solutions within the complex ecosystem of internet access.

**There are many ways our future could unfold.** We face a critical moment in the wake of a global pandemic and the midst of economic challenges, where we can shape the future horizon of digital equity in the UK.

**Interventions which tackle data poverty will help level up UK society.** Data poverty is best understood as a cause and a consequence of social inequality. It is my hope these recommendations to scale solutions will mean more UK citizens get the internet access they need.

**I set out to find place-based pioneers and ways to scale community-led solutions.** What became abundantly clear is that the local cannot be disconnected from the national. In this complex ecosystem, community work is inextricably tied to a national and international ecosystem.

**Across the four nations, I found brilliant examples of determined yet modest community leadership.** From foodbank workers giving out SIM cards to start-ups developing new technologies, there are incredible pockets of determined people making change happen across the UK. The case studies throughout this report give a glimmer of what goes on behind the scenes.

**I also found huge amounts of goodwill and collaboration.** Telecommunications companies teamed up with housing associations; Local Authority teams joined forces with charities and social enterprises. This is a space full of energy, vibrancy and urgency.

**Communities know their local people better than anyone.** As we build towards a more equitable and inclusive digital future, we cannot rely on communities finding workarounds to gaps in national policy and provision. We must create locally-driven, nationally supported solutions. We must build funding, structural support and a coherent national strategy.

**This is a journey towards a new horizon.** Fifty years ago, no one could have predicted what a smart phone might mean to daily lives. We can't know the future but we can decide, right now, to bring everyone with us.

**UK life exists online.** Over two million people are disconnected from the internet, and so our society. We must tackle data poverty with the urgency it demands, to build a world where everyone has the internet access they need.





# Executive summary

The Data Poverty Lab is run by Good Things Foundation, a national digital inclusion charity. They commissioned this report – one of three fellowships – to explore solutions to data poverty across the UK. This research takes its North Star from Good Things Foundation’s 2022-25 strategy; imagining a world **where everyone has the internet access they need.**

## Aim of report

This research explores what data poverty is, how it manifests in the daily lives of people living in the UK, the current solutions available and how we can collectively scale these solutions across government, business, the third sector and communities across the UK.

This report offers a pragmatic approach to comparing interventions and some practical next steps to tackling data poverty. It offers a few paving slabs on a long pathway to building a more equitable digital future. It is a provocation for charity workers, policymakers, Local Authority teams, academics and beyond to consider our next steps in taking collective action. What can we do, together, to make data poverty a thing of the past?

## Methodology

The findings in this report are drawn from interviews with more than 85 individuals, spanning frontline workers, people with lived experience of data poverty, telecommunications workers, policy experts, politicians, trade industry representatives, academics, IT experts and digital inclusion experts. Alongside desktop research, this forms a snapshot of data poverty as it appeared in the Summer of 2022.

Throughout the report, you will find case studies from different parts of the UK and quotes. These illustrate both the reality of living with data poverty and how communities and organisations are building solutions. I recommend browsing the quotes and case studies of this report; they breathe life into a complex subject.

## Structure

Part 1 explores what data poverty is and why it matters. Part 2 looks at existing solutions, their advantages and disadvantages and how they might be scaled.

Part 3 considers the wider ecosystem and how we can build a future-proof approach to digital inclusion and equity.

# Findings and insights

Five key findings emerged from this research:

- 1** | Data poverty in the UK excludes people from access to essential services and participating in UK society.
- 2** | Data poverty disproportionately affects people who already face social inequality and deepens their disadvantage.
- 3** | Affordability and accessibility is a central challenge.
- 4** | Strong solutions to data poverty exist in the UK and some are ripe for scaling.
- 5** | Community-led solutions can only be understood and scaled within the context of a wider ecosystem.

A key output of this research was [The Periodic Table of Internet Elements](#), a graphic which lays out different elements of how the internet is used by UK citizens. This graphic captures what has long felt intuitive; that internet access is essential, a human right and spans essential needs, identity, self-expression and connection. If we are not online in today's world, we are excluded from UK society.

UK citizens who have experience of being in care, claim benefits, are refugees, have a disability or long-term illness, are fleeing domestic violence, or face other forms of social disadvantage are more likely to face data poverty. Lack of good internet access makes their situation worse. In times of crisis or cycles of struggle, access to the internet is all the more vital.

The cost of living crisis and the impending recession is forcing families to choose between rent, bills, food and internet. Affordability is key, but it is closely accompanied by accessibility. Citizens are not always aware of cheaper options, nor do they feel empowered to access them, due to fear of being disconnected, accessibility barriers and the complexity of switching when life is already a tangle of complicated threads.

This research details nine solutions to data poverty, offering their pros and cons and how they might be scaled. It offers a [framework for comparing solutions](#), specifically focused on the needs of individuals disproportionately affected by data poverty. This framework can help us understand solutions now and in the future, as technology evolves.

The ecosystem of internet access is complex: telecommunications companies, government at all levels (local, regional and national and central Government), regulation, global investment, local communities, philanthropy and the individual intersect to create access to what has become a human right. The internet is now equivalent to a utility, a pipeline to essential state-delivered services, like the NHS. Community interventions are vitally important, but they are liberated or hindered by the wider conditions. To scale up community-led solutions, we have to look at the wider ecosystem and conditions for a sustainable future.



# Recommendations

This report offers three overarching recommendations:

## Recommendation 1

**Focus collective effort on scaling solutions for reaching people who need internet access the most.** The three solutions identified as most ripe for scaling are:

- A WiFi in a box:** this relatively cheap technology uses mobile signal to provide home WiFi. This is a quick fix to get people and households internet access now. It is more suitable and sustainable than other quick-fix solutions. The case studies featured in this report show how.
- B Social tariffs:** affordable tariffs for people claiming benefits in the UK is a core, scalable solution. Work must be done collaboratively with industry to scale up adoption. This could be via automatic enrolment, switching support, awareness raising and other methods. Central Government subsidy will be important to make this truly affordable to everyone who needs access to essential services.
- C Community fibre providers:** are organisations who put community needs as a central mission of their work. Altnets who advocate on behalf of their communities will be crucial in getting rural areas the fibre infrastructure needed for long-term connectivity. Market conditions, regulation and subsidies must continue to support these organisations

## Recommendation 2

**Continue to build a collaborative effort across the ecosystem, harnessing goodwill to develop appropriate regulation and government support.** Getting everyone the internet access they need has to be a collective effort. The UK infrastructure backbone comes largely from private investment. There is much goodwill amongst telecommunications companies to address data poverty, but they have a responsibility to make a financial return to keep that investment coming. The UK needs this investment, to keep up with future infrastructure needs.

Market forces have helped us bring the overall cost of internet down; it is relatively cheap compared to many other countries. In tackling data poverty – those being left behind by this system – regulation and subsidy must work collaboratively with industry to harness market forces and find a delicate balance that services all UK citizens. This will help us move into the future and bring everyone with us.

## Recommendation 3

**Politicians and public policy makers need raise the level of prioritisation of digital inclusion.**

Data poverty is inextricably tied to digital skills, devices and confidence. It affects the success of every government department – health, work, energy, enterprise, housing, education, benefits, migration, tax – at every level of government. All of these elements of our lives and of government require good internet access in the modern age.

The impact and budgetary pain of data poverty is felt by all departments, but the responsibility is not shared by all. This report recommends:

- A** A new and unifying Digital Inclusion Strategy from Central Government, with buy in across government departments
- B** Manifesto commitments to prioritising digital inclusion
- C** Independent research which quantifies the productivity and economic losses of data poverty



# Limitations and further study

This report offers a snapshot of data poverty and its solutions as it was in the Summer of 2022. Technology evolves ever faster; some solutions were not selected as ripe for scaling due to issues of privacy and net neutrality. A person who finds internet unaffordable or who struggles to access internet should never pay for that access with their privacy or rights. In future, evolutions in implementation or technology might address these issues, in which case these reservations will be rightfully out of date.

The Periodic Table of Internet Elements and the overview of solutions are not exhaustive. Social inequalities and social barriers are not homogenous; the different people I spent time with had vastly different experiences. What is attempted here is to bring together commonalities in experience which can help guide decision makers and passionate people tackling this issue make challenging choices. More research is needed on the impact at a larger scale, the variety of experience in urban, coastal and rural areas, the intersectional nature of inequalities and the environmental impact of these solutions.





# Conclusion

Lack of good access to the internet is both a cause and a consequence of social inequality. In the UK, it affects access to essential services, our ability to express ourselves, how we connect with others and participation in society. The scalable solutions identified here offer a next step towards a future horizon, where data poverty is a thing of the past. This research is inspired by tangible examples of how collective action across the four nations is making progress; the case studies here show that we are already finding a way forward. The challenge is how we bring everyone with us into that inclusive digital future.





# Introduction

## Aim of report

The [Data Poverty Lab](#) is a collaboration between [Good Things Foundation](#) and [Nominet](#), set up in 2021 to find sustainable solutions to data poverty. This report is one of three fellowships and explores future-facing solutions to data poverty.

## How to read this report

### A quick guide for different audiences

#### **Charity workers, social enterprises, community advocates, philanthropic funders, you might be most interested in:**

[A quick graphic on why the internet is essential](#)  
[This matrix which compares different ways to get people online](#)  
[The insights section capturing lived experience](#)  
[My top recommendation for getting local people online is WiFi in a box](#)

#### **Policymakers, politicians, telecommunications colleagues, regulators, civil servants, you might be most interested in:**

[A quick graphic on why the internet is essential](#)  
[This matrix which compares different ways to get people online](#)  
[Ways to think about social tariffs](#)  
[Section 3: Towards a healthy ecosystem for the future](#)

#### **Local Authority workers, you might be most interested in:**

[A quick graphic on why the internet is essential](#)  
[This matrix which compares different ways to get people online](#)  
[My top recommendation for getting local people online is WiFi in a box](#)  
[This section on Local Authorities](#)

#### **Researchers, academics, you might be most interested in:**

[A quick graphic on why the internet is essential](#)  
[The insights section capturing lived experience](#)  
[This matrix which compares different ways to get people online](#)  
[Section 3: Towards a healthy ecosystem for the future](#)

# Part 1: What is Data Poverty and Why Does it Matter?

This report takes its North Star from Good Things Foundation's 2022-25 strategy: that *everyone has the internet access they need.*



# What is data poverty and why does it matter?

**Data poverty in the UK is no longer about being online or offline.** It is about whether the internet that reaches you reaches your needs. Data poverty in the UK is more likely to be experienced as internet that is too slow, or drops out, or internet you can't afford.

**Data poverty in the UK is rarely experienced in the way that data-rich people imagine.**

Data poverty can be an older person who's never opened a laptop. But it's more likely to be a 14-year-old waiting for a homework page to load because they are sharing a connection with two siblings. Or a job seeker running out of data as they navigate to a job interview. Or a young mum moving between McDonalds and a chicken shop to get free WiFi to check on her kids.

**Nesta defined data poverty in 2020** as "those individuals, households or communities who cannot afford sufficient, private and secure mobile or broadband data to meet their essential needs"<sup>1</sup>.

**But what does essential mean in today's world?**

Work by the Nuffield Foundation with Loughborough University and the University of Liverpool on a [Minimum Digital Living Standard](#)<sup>2</sup> (MDLS) is working towards providing a benchmark of what devices and data connectivity qualify as a minimum standard of living. The Welsh Government is also working towards an MDLS<sup>3</sup>.

Their definition goes beyond the basic: "A minimum digital standard of living includes, but is more than, having accessible internet, adequate equipment, and the skills, knowledge and support people need. It is about being able to communicate, connect and engage with opportunities safely and with confidence."<sup>4</sup>

The Data Poverty All Party Parliamentary Group (APPG)'s State of the Nation report calls for an agreed definition of data poverty and a mandate for the Office for National Statistics to collect data.<sup>5</sup> This will be key for understanding our baseline is more depth and measuring progress. This report uses Nesta's as a working definition.





# Why does data poverty matter?

## A periodic table of elements

UK citizens need the internet to access essential services and participate in society.

Internet access is elemental to UK living. Our lives exist in a fluid mix of online and offline experiences, spanning medical, housing, financial, employment, education, civil, government services, entertainment, community, social connection, creativity, mobility and access.

**“For me, having data is as important as having stuff in the fridge for me to eat. Because I can’t operate. I can’t live day to day if I can’t connect.”**

*Lived experience participant*

This graphic represents what people in the UK use the internet for. The overall domains are split down into the *elements* of internet access.

To download a usable version of this graphic, visit the Good Things Foundation website, [here](#).





# Three key takeaways from the table of elements

1

**In the UK, many of these elements partially exist online.** Anyone who doesn't have internet access is cut off from real-world access too.

**"I can't walk into my doctors if I need to prescription or something, I have to go online if I need to renew."**

*Lived experience participant*

2

**Many essential services are digital first;** they are provided online as the default access option. This means the cost-barrier of internet access can prevent vital access to essential services.

**"If it costs you £40 a month to get access to the NHS, the NHS isn't free anymore"**

*Simeon Yates, digital poverty expert*

3

**Elements mean different things to different people;** a video doorbell offers **convenience** to an office worker, **independence** to a wheelchair user, and **safety** to a woman fleeing domestic violence.

**"[The internet means] freedom to do things you really need. We take for granted what we do online. It can be very insignificant to some people, but it can be life changing for others."**

*Community Worker*

# Why do people face data poverty?

Like all subject areas of poverty – fuel poverty, food poverty, period poverty – data poverty is largely driven by poverty.<sup>6</sup> Many people in the UK cannot afford internet.

Data poverty is linked to **geography** and **confidence**. Because of changing infrastructure, it is possible to be both financially, socially and culturally wealthy, but face data poverty. It is also possible to live amongst the most technologically advanced infrastructure in the world and be disconnected.

## Affordability

In 2021, around 2 million households were experiencing affordability issues with their broadband or smartphone. For people who aren't online, 19% say cost is the main reason.<sup>7</sup>

**Telecoms bills are becoming unaffordable for many.** The cost of living crisis is forcing families to make impossible decisions, with 5.7 million UK households in April 2022 struggling to pay their mobile, landline and broadband bills.<sup>8</sup>

The lowest earners spend almost double their proportion of income on telecoms than the highest earners.<sup>9</sup> The poverty premium means that Pay As You Go customers pay comparatively more for their internet access.<sup>10</sup>

## Geography

Urban areas have better broadband and mobile coverage than rural areas, and better speeds. Only 83% of rural areas in the UK have access to superfast broadband (30Mbps) compared to 96% of urban areas.<sup>11</sup>

To address limited rural access, the **UK Universal Service Obligation (USO)** for broadband was introduced in 2020. This creates a baseline expectation that all Internet Service Providers (ISPs) must offer everyone a service for a minimum of £48.90, no matter where they live. Although this prevents ISPs from charging very high fees for connecting rurally isolated individuals, this price is unaffordable for many.

**Mobile coverage is not as good in rural areas** than urban areas. Only 81% of UK premises has 4G data coverage<sup>12</sup> and 4% of UK landmass has no good mobile signal at all (called 'not-spots').<sup>13</sup>

The UK government's manifesto commitment is to deliver nationwide Gigabit broadband by 2025. This target was revised in November 2020 to a minimum of 85% of premises by 2025, and in February 2022 this was revised to gigabit broadband coverage 'nationwide-by-2030' (99%).<sup>14</sup>

## Confidence

Ofcom data shows that the top reasons for not going online are perceived lack of need or interest (47%) or that it was too complicated (31%).

Motivation, education and confidence are closely tied together. Many individuals express lack of interest, but when shown the benefits demonstrate increased engagement.<sup>15</sup>

**“Once they start it allows them to feel a bit more at ease with everything, they don't feel as kind of intimidated by the internet. They've realised it's actually fairly easy.”**

*Community Worker*

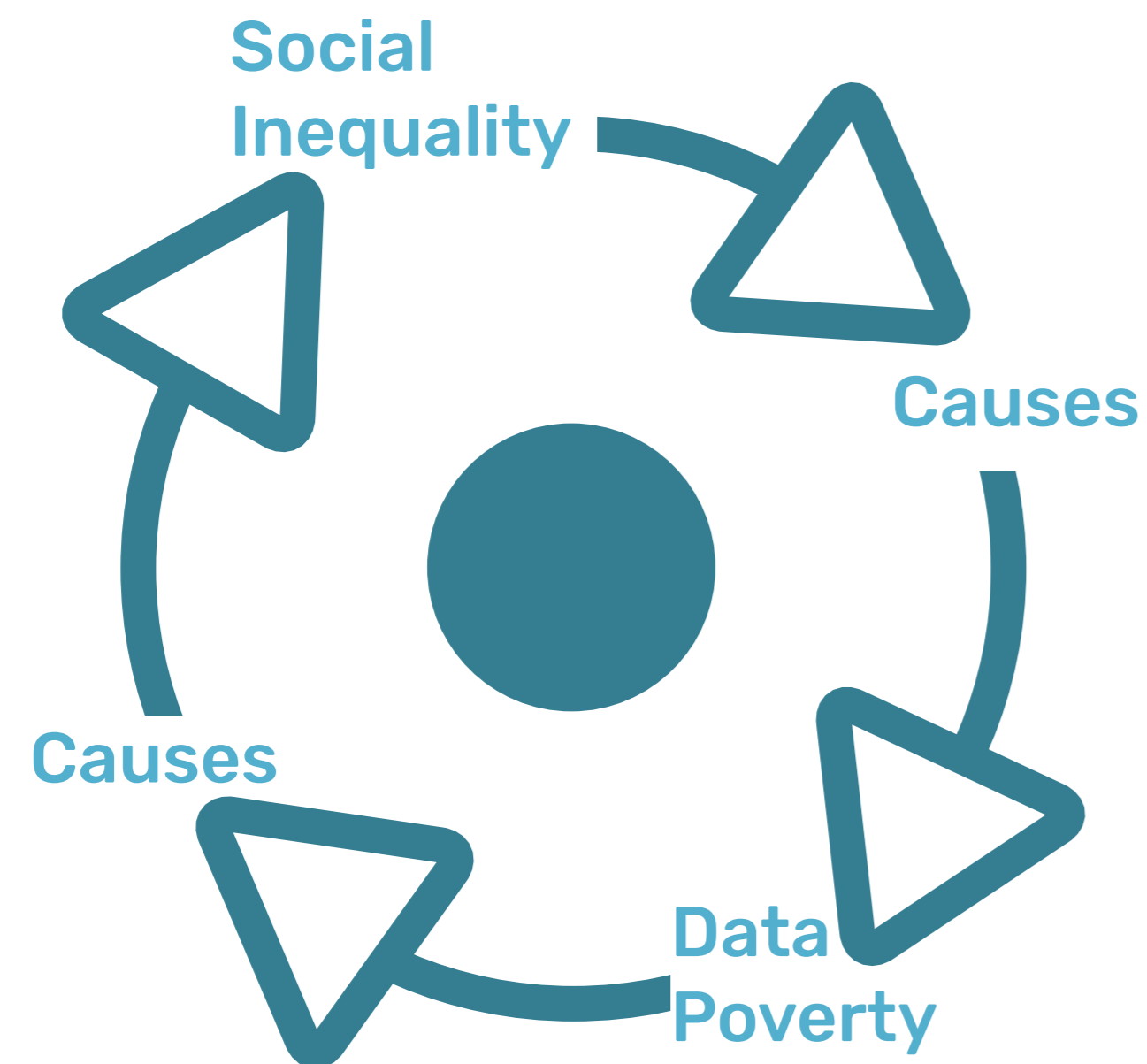


# Social Inequality

**Data poverty is best understood as a cause and a consequence of social inequality.**<sup>16</sup> Data poverty is felt acutely by people facing a form of social disadvantage, who may not have the finances, skills, situation or social capital to get good internet access.

People who face a form of social disadvantage use government services more than the average citizen<sup>17</sup> and therefore access is more critical to them. Lack of adequate internet access fuels these challenges, reducing access to essential services in health, housing, work, education, civic participation, social connection and beyond.

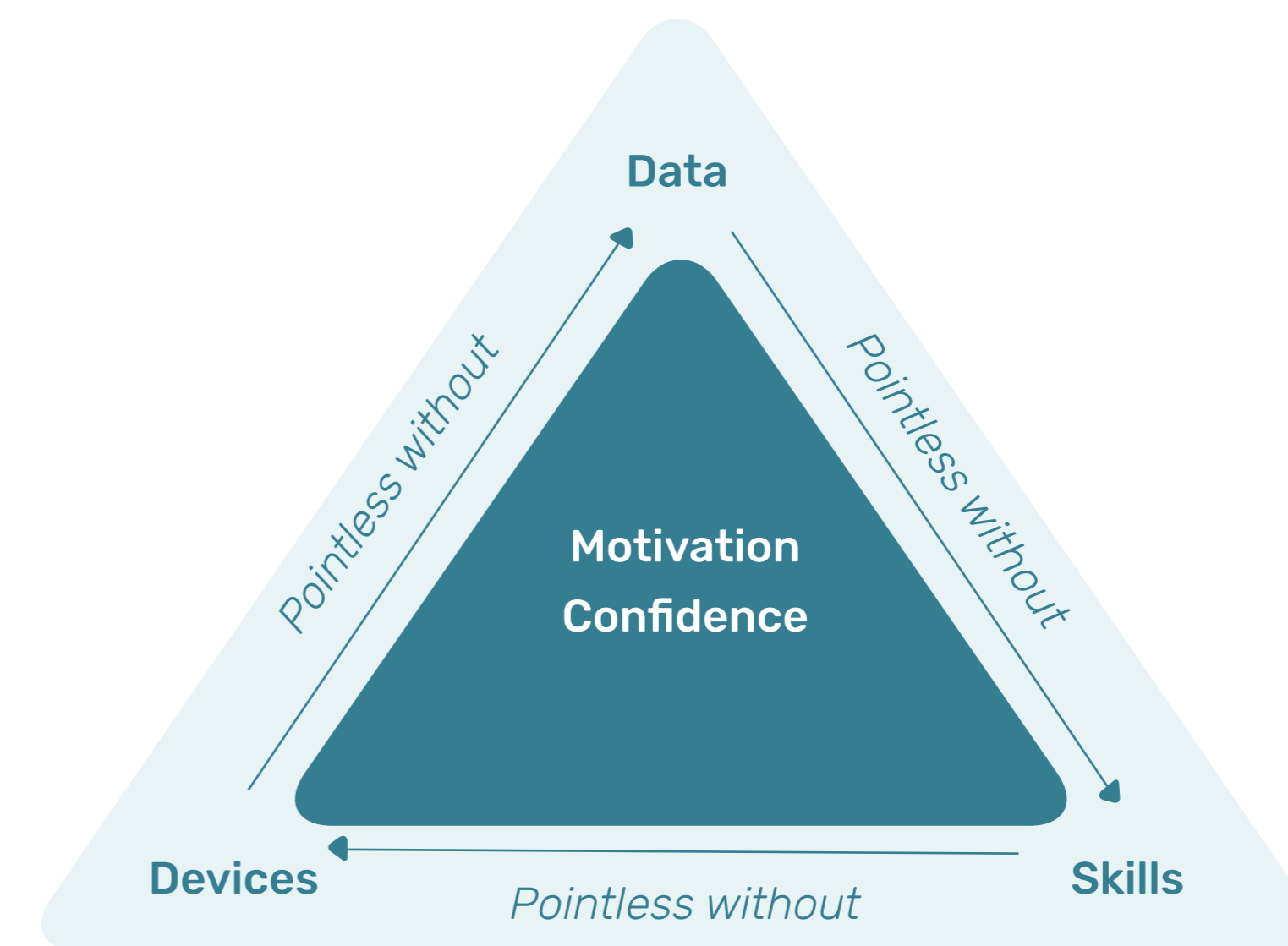
**Interventions which tackle data poverty take a step closer to breaking cycles of social inequality.** Access to services and support improves lives. It is circular; one informs and amplifies the other.



# The pointless triangle

Data poverty exists within wider digital exclusion and inequity. Devices, data and skills are pointless without each other. Individuals need the confidence and support to safely conduct their lives online.

**All recommendations in this report are framed in this wider context; *any initiative which tackles data poverty must address digital inclusion and equity; access to devices, data and skills, and the ability to use the internet confidently and safely.***



# Who is affected by data poverty?



## **Some groups are disproportionately more likely to have no or poor internet access:**

**Low earners** are less likely to have home internet. 51% of households earning £6,000–10,000 had home internet access compared to 99% of households with an income over £40,001.<sup>18</sup>

**People in lower socio-economic groups (DE)** are more likely not to have internet at home; 14% compared to 2% in higher socio-economic groups, (AB).<sup>19</sup>

**Benefit claimants** are less likely to be digitally engaged<sup>20</sup> and households on Universal Credit are nine times more likely to be behind on their broadband bills.<sup>21</sup>

**People living in rural areas** are more likely to have limited access. 9% of rural properties cannot receive a decent home broadband connection (fixed line); this is only 1% in urban properties, and 2% in the UK overall.<sup>22</sup> Around 0.1% of UK properties can't get access to decent fixed broadband (10Mbps) or 4G, meaning they are effectively cut off from the online world at home.<sup>23</sup>

**People age 65+** are more likely not to have internet access; 1 in 5 compared to just 1% of 18–34 year olds.

**People with a disability** are less likely to be internet users.<sup>24</sup> Notably, when people with a disability are online, they are 27% more likely to say the internet makes them feel less alone.<sup>25</sup>

**Young people struggle with affordability;** 18–34 year olds are three times more likely to be behind on their broadband bill.<sup>26</sup>

**Ethnic minority groups:** Some initial links between digital exclusion and people from Black, Asian and Minority Ethnic groups have been established.<sup>27</sup> The UK Digital Poverty Evidence Review 2022 calls on larger sample sizes to understand intersectionality across ethnicities, socio-economic status, age, education, income, geography and beyond.<sup>28</sup>

Data is limited on internet access for **refugees, asylum seekers, care leavers and people facing homelessness.** Reports from frontline workers suggest access is limited to these groups, especially due to financial instability and having unstable accommodation.



# A note on approach and methodology

**This research is non-exhaustive**, and inevitably there will be gaps. It was conducted primarily over three months, using a combination of literature review and qualitative research methods. I spoke with over 85 individuals, including frontline workers, people with lived experience of data poverty, telecommunications workers, policy experts and politicians, trade industry representatives, academics, IT experts and digital inclusion experts.

A key gap in this research is the environmental impact of these solutions. Although the solutions identified hold in mind the implications of increased data consumption and data storage, the environmental footprint of data is not explicitly explored. Retrospectively, this is an omission.<sup>29</sup> Although developments in data storage technology may find ways to mitigate these risks, any future work on data poverty and sustainable solutions must be environmentally-minded.



# Key insights from research

1

Internet is a human right

**The internet was frequently described as a human right.** Participants described how 'everything' is online, including many things which offer individuals the chance to live independently and with dignity.

**“Having the internet and data is essentially a human right”**

*Lived experience participant*

“[The internet is] a basic human right that we have these days. To be independent to be able to look after yourself. How can you look after yourself without all the information and you can't get access to it?” *Community worker*

“It's like everybody's third arm now isn't it, the internet. And if you've lost that third arm, what do you do?” *Lived experience participant*

2

Essential services exist online

**Access to essential services are frequently digital first.** Participants expressed frustration that essential needs are online, and there is not always help to access them.

“If I walk into my local bank I can't get to see anybody. Actually there's no people in there. It's like the Marie Celeste and if you do dare find a person they say, oh no, oh no, you've got to go online.” *Lived experience participant*

**“If you're forcing people into a position where they have to use these services online, then there should be an easier way of making it available for them.”**

*Lived experience participant*

Elijah\*, 53, reflected that when he was homeless, he found himself discharged from addiction services. Without the data to log in, he didn't receive electronic appointment notifications, and so was discharged.

**“It was so frustrating, I'd say to them I do want the support but I haven't got any data. It was that catch-22 cycle they would say well you're not engaging with this and I'm saying but I haven't got the tools to engage.”**



# Key insights from research *(continued)*

## 3 | Mental health

**Limited data is a cause of stress and anxiety.** Participants frequently referenced the stress caused by managing data allowances.

“It’s like watching your electricity meter tick down. It’s another thing you have to monitor and manage.” *Project manager, digital inclusion project*

Janine\* uses a basic Pay As You Go phone which she borrowed from a friend so she can get to job interviews. Every time she goes to a job interview, she gets anxious about how much data it’s using to navigate. She can list public WiFi spots easily: McDonalds, Thunderbird Chicken, Barclays, Wagamama’s, some gyms.

**“I definitely feel anxious. I’m not good at maths so the whole 500GB or 1GB, I don’t mathematically know what that means. I just know how long it lasts.”**

**Data allowances create a scarcity mindset.** Scarcity mindsets in the context of financial difficulty are well documented, including their

negative effects on cognitive capacity and wellbeing.<sup>30</sup> This research suggests the experience of running out of data has a similar effect. The mental burden of monitoring usage, remembering to switch data off, finding public WiFi, and topping up just enough for peace of mind comes at a cost.

**“I don’t have the luxury of being able to ramble on, because I’m conscious that the data’s ticking off all the time on a Zoom.”**

*Lived experience participant*

“I have to remember to turn off the hotspot and turn off the data when I’m not using it.” *Lived experience participant*

“When I’m using maps, walking around, it’s definitely unreliable and that doesn’t help my anxiety. So when I’m topping up, if I have money, I double it, just to be sure.” *Lived experience participant*

Further research on the link between scarcity mindset and data allowances could enable evidence-driven rationale on minimum data needs.

# Key insights from research *(continued)*

## 4

### Access and cost of living

**The cost of living crisis** is causing more people to choose between essentials; fuel, food, broadband and housing. Reports are arising of people choosing between feeding their children or paying for WiFi.<sup>31</sup>

**“They’ve had to choose between having data, feeding the meter or putting food on the table. In some instances, they’ve sold their phones.”**

*Digital inclusion coordinator*

Maria\*, 23, describes that when she is low on funds, she chooses between heating and electricity. **“Electricity always wins. Because I need it for WiFi.”** *Lived experience participant*

**For some people, public WiFi is a lifeline.** Public WiFi continues to be a way for people to

access essential, elemental services. 6% of 8-25 year olds surveyed by the Digital Youth Index cite public WiFi as the main way they access the internet.<sup>32</sup>

Lee\* doesn’t have data so he hops between WiFi at friends’ houses, bars, trains and eateries. **“Sometimes I get lost [without data to navigate]. Sometimes I’ll be in the middle of a [text] conversation and I have to leave the WiFi. It’s annoying to ask your friends for a hotspot.”**

**Charities which give out free data in databanks only work well when frontline workers are digital confident.** Many charitable workers feel intimidated by technology and so cannot help the people they support to get good access.

**“Some relatively small organisations are really digitally savvy and passionate about distribution. They end up distributing loads of data just because they really – I think – have technical skills to feel comfortable doing IT stuff.”** *Staff member, National Databank*

## 5

### Trust is low

Many participants expressed frustration and distrust with telecommunications companies. This was focused on mid-contract price changes or feeling persuaded into unaffordable contracts.

**“I don’t trust phone companies. They’ve got it in their contracts they can change prices whenever they want.”**

*Lived experience participant*

**“You get the phone and then six months later it doesn’t work properly and you’re stuck paying all this money... [the phones] aren’t built to last 24 months.”** *Lived experience participant*



# Key insights from research *(continued)*

## 6

### Buying Internet

**Amongst UK citizens, digital confidence to buy internet is low.** Many people expressed feeling left behind by technology and that it is too late for them to catch up. Surrounded by jargon, buying internet is very different to buying electricity or water.

**“I think a lot of the people we came across it was an element of lack of confidence... some of the jargon, things like upload and download speed. It might confuse them a little bit and they didn’t quite grasp what it meant. So it’s just me being more of a guiding hand sort of help them through the process, really.”** *Digital Inclusion Officer, Monmouthshire*

**People feel they are being encouraged to buy internet they can’t afford.** Participants report feeling manipulated by upselling and being encouraged to buy products they don’t need and can’t afford.

Janine\*, 23, grew up in care. She lost her phone a couple of years ago, so she rang up her provider. **“I ended up agreeing on a price which I couldn’t really afford”** but **“you can be easily persuaded”**. When she lost her job, she fell behind on her bills, so the phone was cut off. She is now repaying £900 of debt but can’t use the phone.

**Loyalty penalties are driving up the cost of internet.** For broadband, the average loyalty penalty per person per year is £83 for mobile and £61.<sup>33</sup> 1 in 7 customers pay a loyalty penalty across broadband, mobile and mortgages.

Nellie\* was paying £100/month for her internet provision, having been with the same provider for many years. A volunteer called her provider and negotiated this down to £35. Later, this went down further to £15 after the volunteer discovered Nellie was receiving Pension Credit, and so was eligible for a social tariff.

**The onus is on customers to manage rising internet bills.**

Dean\* is a Deliveroo driver and freelancer. During an economy drive, he realised his internet bill had increased from £30 a month to £55 month over 5 years, with no change to service. He switched provider and saved £30 a month.



# Case study – Age UK, Hammersmith and Fulham



In the Internet Advice Service at Age UK Hammersmith and Fulham, digital advisors and volunteers help local people understand devices, data and sometime renegotiate contracts and get refunds. Volunteers report loyalty penalties affects older customers more:

**“For the older generation, they like BT or British Gas or whatever. They've been secure. 'I'll stay with it. I'll just pay what I owe.' And that's the mentality that they have and because of that loyalty, [it] actually costs them a fortune.”** *Internet Advice Service Worker, Age UK, Hammersmith and Fulham*

Workers in the service also see elderly people upsold heavily by providers. Many don't understand what they're buying. **“The amount of people that have gone into a [provider] shop and have been sold something is just shocking.”**

Sanjeev\*, in his early seventies, went into a mobile phone shop to transfer from a Pay As You Go SIM Card to a monthly deal. He left with a new mobile phone, a high priced mobile deal, a new tablet, insurance, plus fibre broadband to the house. He was told this was the best deal but was not shown the monitor to compare.

At its worst, vulnerable people are being scammed. A woman arrived at the service who had been to an internet café and charged £35 to send an email, which she later couldn't find.



# Gaps in provision

## Care homes and care

**Many care home residents lack private, meaningful internet access.** The UK has around 20,000 CQC registered care homes and only 35% of them provide internet access for residents.<sup>34</sup> Around 390,000 people live in care homes in the UK.<sup>35</sup> Care home residents may not be demanding internet, but the benefit to them in terms of tackling social isolation, offering dignity, independence and improving wellbeing are huge.

**Internet access also offers potential cost savings in medicines management and telehealth.** Domiciliary care workers (who visit people's homes) use digital devices to capture photographs (of tissue, for example), input case notes and document medicines. They need internet to do this and reports are coming in of a) workers having to use their own devices and data allowance and b) driving long distances to find signal to input their work. Interventions here could have vast implications for improve care, efficiency and cost-savings.

This evaluation of 'Connecting residents in Scotland's Care Homes' details the significant positive impact of connecting care homes.<sup>36</sup> Liverpool's 5G Health and Social Care Testbed Project demonstrates strong evidence for cost savings and impact.<sup>37</sup>

## 16-18 year old gap

**There is a gap in home internet provision for independent 16-18 year olds.** When we turn 16 in the UK, we can get married, apply for a house, leave school, get a full time job, get a passport, join the army, but buying monthly internet is difficult. Young people who live independently – especially those leaving the care system – either pay a poverty premium with Pay As You Go internet, find workarounds through their council or corporate parent, or go without. The apprenticeship incentives and work support for independent young people in this age bracket is less meaningful if internet is not available.

This post on an internet forum illustrates this challenge:

**"AGE LIMIT for broadband account?**  
on 30-05-2022 06:28  
Im due to be moving into a supported accomodation soon, and i have to source my own wifi as they dont have a residents wifi. Im 17, have sadly lost both my parents & i need wifi for college applications, college work/study, writing CVs for part time jobs, etc... Alot of wifi companies wont allow U18s which is so stressful, does [provider] allow U18s to get wifi?"<sup>38</sup>

# A complex picture: further research insights to inform solutions

**People who cannot access the internet in the UK are comparatively more excluded** than if they lived in a country with less internet access to the overall population.<sup>39</sup>

**Citizens who are not online are not represented in population data.** This influences data driven decisions, for example risk scoring in insurance. A recent example would be monitoring countrywide mobility using mobile phones during the COVID-19 pandemic.<sup>40</sup>

**Privacy mechanisms can automatically exclude users;** multi-factor authentication (MFA) can exclude people who cannot afford multiple devices. There have been anecdotal reports that MFA creates barriers to job hunting for those who can't afford a phone<sup>41</sup> and to those who are neurodivergent.<sup>42</sup>

**There is a need to protect citizens' right to be offline.** The Welsh Government has made key strides in developing a digital inclusion offer, which includes a recognition that citizens have a right to be offline.<sup>43</sup>


**Platforms and technology creators have a responsibility to bring accessibility and safety into design.** Much of the focus of safety by design has been on children, such as the work of 5Rights Foundation<sup>44</sup> and The Children's Code<sup>45</sup>, created by the Information Commissioners Office. This is important work, but if we are reaching for a truly inclusive and equitable future, platforms must embed safety and accessibility principles for excluded groups into design.

"It's a bit like if you manufacture a car, it has to have seatbelts in it now because we know that cars are a technology that can be dangerous, and they're also part of everyday life. We also know that people don't always use cars in life-protecting ways. But then we need to make sure that when we design that intervention (the seatbelt), we do that with - and not just for - a diverse range of seatbelt users.

Some evidence has shown women who wear seatbelts are more likely to suffer severe injuries or death than men who wear seatbelts, for example. So, seatbelts aren't working the same for everyone, and there might be physical, social, or other reasons for this. Those reasons need to be explored in the design process.

The same is true of the digital world. We have an obligation to make it safer because we know it can cause harm, and it's ubiquitous in everyday life. And we need to make it safer with the participation of people affected by it." *Kira Allmann, digital inequality expert*





## Part 2: Mapping the spectrum of existing solutions



# Mapping the spectrum of existing solutions

Over three months, I studied solutions which tackle data poverty. The comparison analysis in this section is non-exhaustive and offers a quick guide to initiatives which are ripe for scaling. I review these using a framework for measuring how each solution fits the needs of people disproportionately affected by data poverty.

## A note on frameworks

Existing frameworks which codify what makes a good internet connection:

- [The CHES framework](#) by Good Things Foundation summarises important qualities: Cheap, Handy, Enough, Safe, Suitable.<sup>46</sup>
- The [Meaningful Connectivity Framework](#) by The Alliance for Affordable Internet considers four pillars: 4G speeds, appropriate devices, unlimited broadband and daily use, as a guiding light for assessing connectivity, mainly in developing countries.<sup>47</sup>
- The [Corresponding Fields](#) model by Ellen J Helsper considers digital inequalities in the wider context of social inequalities. Her approach underpins much of this work.<sup>48</sup>

In the context of these frameworks, I observed some key qualities of **good data poverty interventions**. These are not qualities of internet which are important to every user. They are the qualities of good interventions from the perspective of a user facing social disadvantage and more likely to be facing data poverty.





# Qualities of a good intervention for users facing digital poverty



- **Private spatially:** as internet use has changed, we now more than ever carry out our intimate lives online. Privacy is dignity. Any internet solution in the UK must allow someone to look up health conditions they are worried about, talk to a counsellor or take a video GP consultation, without having to share this experience with those around them.
- **Private digitally:** the online world is brimming with opportunity, but inevitably also risk. Secure connections are necessary to submit personal information on benefits forms, do online banking, or complete medical questionnaires. Users must be safe on a private connection.
- **Decent quality:** individuals need a connection with good speeds, enough data allowance and low latency. Having good speeds is not a luxury; it is critical for families sharing WiFi connections or for data-hungry activities such as working from home. Low latency is important for work or classroom learning, but also to enable social connection. Recent evidence shows high latency interrupts communication and reduces the sensation of a shared reality<sup>49</sup>.
- **Quick to access:** individuals in this user group need internet now, not in a month, six months' or two years' time. They need to fill in daily Universal Credit journals, renew their prescriptions, speak to someone during a mental health crisis – these are essential services that cannot wait.
- **Affordable:** Affordability is complex; the internet has shifted closer to a utility than a luxury. Families and

- individuals are totalling up rent, energy and food bills and are cancelling their broadband. What is affordable for one household is not affordable for the next.
- **Sustainable:** the pandemic threw a spotlight on internet access, how it is essential and how many people do not have good access. The responses to address the connectivity crisis were impressive, but short lived. We need new solutions that can bridge into the future\*.
  - **Portable:** many people in financial hardship or social crisis move around a lot. An asylum seeker, a woman fleeing domestic violence, a person who has recently lost their job and is sofa surfing; they need internet to sort out documents from abroad, speak with trusted friends or look for work. They need internet they can take with them wherever they go next.
  - **Plug and play:** many people without good internet access don't have essential digital skills. The friction of understanding tariffs, navigating installation and device set up is too complex. Simpler options work better.
  - **Pause available (or no contract):** Poverty is unpredictable. Low-earning workers have less savings, are more likely work unpredictable hours and have a smaller budget. Financial instability is consistent across many groups facing data poverty; a fridge breaking, an unexpected gas bill, or reduced hours can eat up the small amount left over each month. Solutions with pause options (like a gym membership) or without contracts are much better suited.

\*Sustainability here refers to social, not environmental sustainability. See note under methodology on environmental impact.

# Comparison matrix: models at a glance

This matrix shows at a glance which models have the qualities of a good intervention for this user group. The analysis which follows goes into detail.

	Private specially	Private digitally	Decent quality	Quick to access	Affordable	Sustainable long-term	Pause available	Plug and play	Portable
Social tariffs	✓	✓	○	○	○	✓	○	✗	✗
WiFi in a box	✓	✓	✓	✓	○	✓	✓	✓	✓
Community fibre provider	✓	✓	✓	✗	○	✓	✗	✗	✗
Community 5g networks	✓	○	○	✗	○	✓	○	✓	✗
SIM card distribution	✓	✓	○	✓	✓	✗	✓	○	✓
Zero-rating	○	○	○	○	✓	○	○	○	○
Social housing	✓	○	○	✗	○	✓	○	○	✗
Challenger ISPs	✓	✓	✓	○	○	○	○	✗	✗
Community centre WiFi/libraries	✗	✗	○	○	✓	✗	○	✓	✗

**Key**

- ✓ Generally yes
- Sometimes
- ✗ Generally no

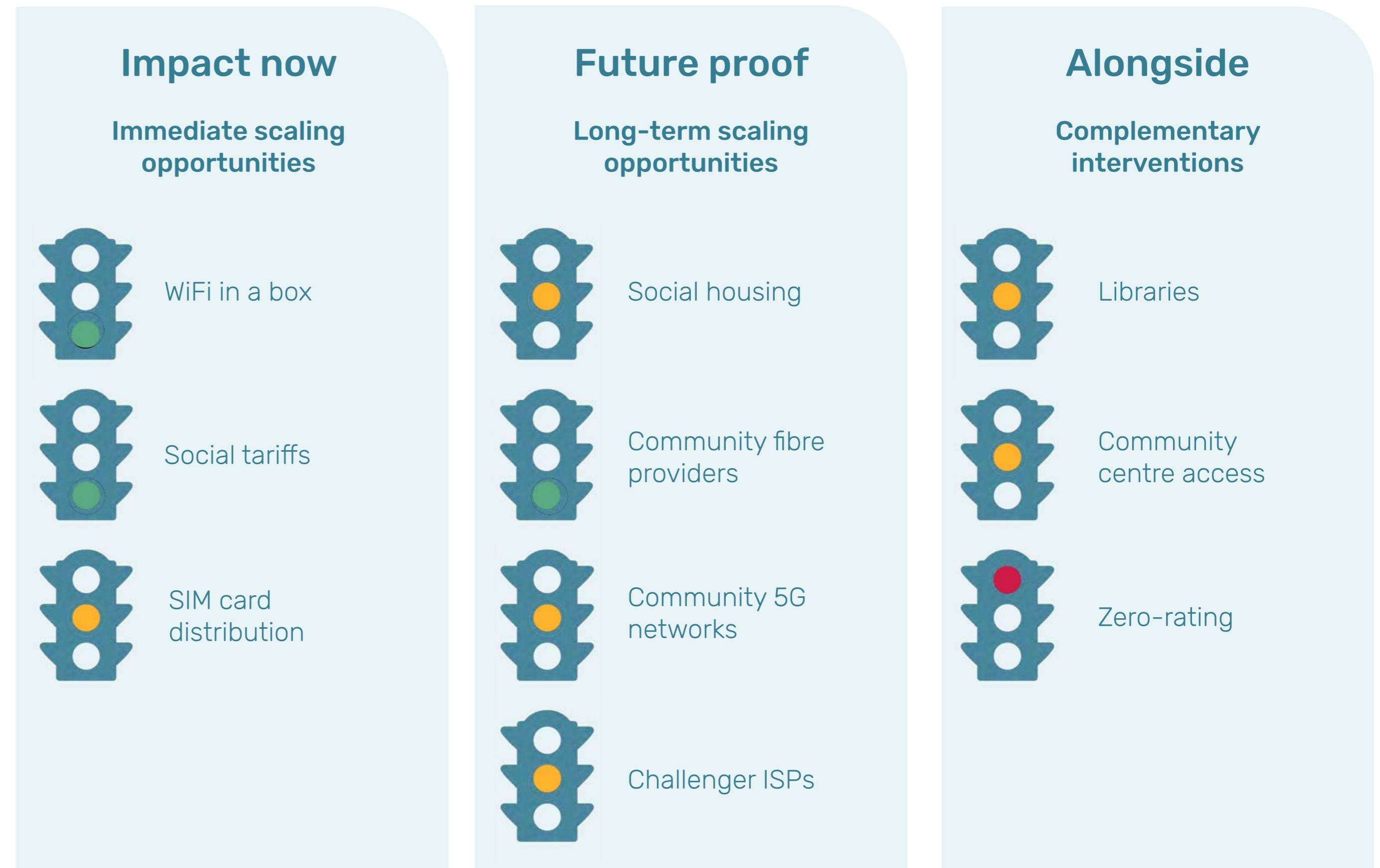


# Overall scaling recommendations: solutions to data poverty

Through analysis, the models for tackling data poverty are categorised in 3 ways:

- 1. Impact now:** initiatives which could be scaled with immediate effect
- 2. Future proof:** initiatives which will take longer to implement but could have long-term impact
- 3. Alongside:** initiatives which will never be the solution to data poverty, but can complement other initiatives

The traffic lights indicate which are most ripe for scaling. WiFi in a box, social tariffs and community fibre providers are identified as the top three initiatives most ripe for scaling.



# Overall scaling recommendations: solutions to data poverty *(continued)*

Initiative	Description	Scaling Category	Ripe for scaling	Why
<b>WiFi in a box</b>	Home WiFi using a mobile signal	<i>Impact now</i>	Yes	Quick to roll out through frontline services; portable; non-contractual; supports whole household.
<b>Social tariffs</b>	Affordable tariffs for people claiming benefits	<i>Impact now</i>	Yes	Model exists. With tweaks, could set new precedent for income-dependent access. Scaling is within reach.
<b>Community fibre providers</b>	Community-led network providers	<i>Future proof</i>	Yes	Builds UK infrastructure whilst getting rural communities connected.
<b>SIM card distribution</b>	SIM card and data voucher donations	<i>Impact now</i>	Maybe	Quick, portable and cheap. Individual access only; time-limited; not sustainable long-term.
<b>Social housing</b>	Affordable internet for social housing tenants	<i>Future proof</i>	Maybe	Could be affordable long term, but privacy and net neutrality is key.
<b>Community 5G networks</b>	Private 5G networks offering free home WiFi	<i>Future proof</i>	Maybe	Has excellent Smart home potential; currently underdeveloped; expensive to scale and risks privacy.
<b>Challenger ISPs</b>	Customer-focused challenger Internet Service Providers	<i>Future proof</i>	Maybe	Opportunity to disrupt market and improve customer experience and access.
<b>Community centres/libraries</b>	Community centres offering devices, data and skills	<i>Alongside</i>	Maybe	Not spatially or digitally private; can only ever be complementary to intimate home use.
<b>Zero-rating</b>	Where key websites do not use up a data allowance	<i>Alongside</i>	No	Limited impact, not fully inclusive, can charge customers with their privacy.

**Key**

- Yes
- Maybe
- No



# Existing solutions: A comparison of different models

What follows is an in-depth analysis of each of the models, with case studies to illustrate.

## WiFi in a Box

WiFi in a Box is any device which offers broadband speeds and connection to multiple devices, via a portable device in the home fitted with a SIM card. This means a home can have internet that feels like broadband, without installing a fixed line network connection.

### Pros:

- **Private spatially & digitally:** unlike public WiFi connections, broadband in a box can be used in the home as a private connection. Giftable schemes can be private to the user.
- **Multiple user:** SIM-enabled tablets or phones can only be used by one person at a time; WiFi in a box can support a whole household, with privacy.
- **Quick to access:** it can take as little as a few days to request, post and set up this solution. This was a key reason for adoption in some large areas across the UK, such as Connecting Scotland.
- **Pause available:** Broadband to the home requires installation costs and a monthly contract. WiFi in a Box is the cost of the router or MiFi and then a monthly data cost. Some social enterprises offering WiFi in a box offer an option to pause the service for no charge or penalty, and often without a contract.
- **Affordable to user:** Costs to the user range from £7-£20 a month; a competitive rate for home internet. Users report being pleased with the price, speed and data amount. The cost of posting a lightweight device to an address is minimal, and the plug and play set up means technical support can be remote.
- **Giftable** – Various providers have found ways to gift or loan WiFi in a box. This means family members can get a box for relatives or a charity can buy it on behalf of someone who would struggle to get a fixed line broadband without a credit check or bank account.
- **Sustainable long term:** with the roll-out of Fixed Wireless Access, much internet access relies on a combination of fixed cable and mobile access. Although there could be issues with high data usage, for many users needs, this is a good short to medium-term solution.
- **Plug and play.** The device is a single box with one plug, which uses mains electricity or is battery-powered (known as MiFi). Customers put the box upstairs, near a window and use mobile signal (4G/5G). This requires minimal digital skills and can be set up by the user.
- **Portable:** the solution is not fixed to the premises. This is ideal for customers in an unstable housing situation; installing fixed broadband makes little sense when a customer knows they will likely have to move before the contract time is up.

# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Privacy:** If a charity contracts directly with the ISP for SIM cards, the organisation can be partially liable for spurious activity and individuals will struggle to monitor their data allowance. Organisations have got round these challenges, but it could be difficult for smaller organisations without easy access to legal advice.
- **Plug and play:** Not all users feel confident positioning a box to get good signal (it needs to be high up in a house, near a window). If the mobile coverage to that location is poor, this can affect speed and latency.
- **Sometimes decent quality:** Speeds vary based on mobile signal strength and number of devices using concurrently. Advanced versions of 'WiFi in a box' have user management which allows multiple users to be online without slowing speeds.
  - **Large buildings** with brick infrastructure have limited mobile reach, meaning some shared accommodation projects have faced quality challenges.
- **Could be sustainable long-term:** Infrastructure challenges Fixed Wireless Access (FWA) – the ability to access the internet via mobile networks – means more customers have to share access with mobile users. Areas of high mobile demand might mean that the service is unreliable<sup>50</sup>.
- **Data allowances:** large data allowances may be needed to cover a household's use. Some communities found that a 20GB data allowance was used up quickly by a family watching BBC iPlayer, and 'Unlimited' packages actually throttle (slow down) speeds after a certain amount is used. Cheaper MiFi units can be very data hungry, using up allowances quickly.
- **Sometimes unaffordable:** currently the box ranges from £75–225, depending on the model. Some social enterprises and charities use philanthropic funding to cover this, but long-term, a more sustainable option may be needed.
- **Telecoms and technical skill needed:** the best versions of this model use advanced technology and strong negotiating skills with telcos. Smaller community organisations would need to partner with a larger organisations to navigate some of these obstacles.



# Existing solutions: A comparison of different models *(continued)*

## Case study – Hartlepower, Hartlepool

Hartlepower, a community interest company based in Hartlepool, offer 'Get Connected'<sup>51</sup> a WiFi-in-a-Box solution. For £20 a month, residents can get a one-plug router posted to their homes. Through a 4G SIM card, they have access to 600GB data per month. They can pause the service at any time with no charge and can call a number on the side of the box to troubleshoot.

Through grant funding, the charity pays for the cost of the router itself (about £75) and staff time to connect and troubleshoot with low- or no-income customers. What began in Hartlepool has scaled regionally and beyond; Hartlepower has now distributed routers to over 1,000 people from Hartlepool across the North East and even to Devon.

Hartlepower partners with a local community-café, Lilyanne's, who keeps a stock of devices on the premises. When someone presents with a social barrier, such as fleeing domestic abuse, Lilyanne's staff can offer the WiFi in a box there and then. By combining digital access with addressing social needs, local people are getting a more rounded package of support – to support them as individuals.

Des\*, 19, recovering from a heroin addiction describes the impact of a connection:  
**"Now, I got my Universal Credit stuff sorted, and just staying in contact with my family. It's good for me mental health as well, there's a way I can contact my CPN [Community Psychiatric Nurse] online ... ask [community worker] to bring me food. Before I had the internet, I couldn't do none of that."**

## Case Study - Get Box, Jangala

[Get Box](#)<sup>52</sup> is a paperback book-sized internet connectivity device, made by Jangala, a humanitarian tech charity. It produces a secure WiFi network using a 3G/4G SIM card. Get Box can be posted to the user, plugged into mains electricity and can support tens of people in a single household.

As a philanthropically-funded charity and social tech organisation, Jangala has been partnering with UK organisations to gift these boxes and help people in immediate need. Get Boxes have been loaned out to families from schools, set up in women's refuges and to NHS service users.

GetBox uses remote fleet management software which means Jangala can receive usage information to troubleshoot problems remotely. This results in an increased ability to track impact; many schools or charities give out connectivity devices/SIM cards and cannot tell if or how they are used. Similarly, Jangala can monitor number of users, data transfer and signal strength, helping them understand and learn from usage.

# Existing solutions: A comparison of different models *(continued)*

## Case study - The Simon Community, Belfast

In Belfast, 14 Get Boxes were distributed around accommodation for young people in hostels and asylum seekers. The boxes provided internet for 70+ people for over 12 months. This meant residents had access in their rooms, instead of just communal areas, increasing privacy and dignity.

A Project worker reported the difference internet can make for asylum seekers, enabling them:

- Social contact with family overseas during a traumatic time.
- Contact with their home country to obtain documentation and evidence for their case to claim asylum in the UK. This is near impossible without internet access.
- Opportunity for activism, to further their rights and make their voices heard.
- Access to trauma-informed support services; a 12 week creative writing story-telling course to process trauma and share experiences.

## Case study - Mental health, Camden & Islington

Camden and Islington NHS Foundation Trust partnered with AbilityNet and Jangala to address digital exclusion for patients accessing their services. What began as a pilot, to ensure continued access to psychological support during Covid, expanded to the whole Trust; patients could borrow a device (tablet), internet connectivity (Jangala Get Box or a donated SIM card) and gain digital skills support through AbilityNet.

The partnership with Get Box offered a 6-month loan scheme of a device and connectivity, a 'stepping stone' towards digital inclusion for access to therapies and internet inclusivity. Over the first 8 months, 106 service users were referred, with over 50 tablets loaned, and many more supported.

**“There was an older couple, who were Irish. They called me specifically to tell me that they had been listening to the Irish radio for the first time in like 20 years. And they were like, Oh, this is amazing. It’s like being a home again. The songs I never thought I’d be able to hear again, this is the best thing.”**

*Community worker, Camden and Islington*



# Existing solutions: A comparison of different models *(continued)*

## Case Study – Connecting Scotland, Scottish Council for Voluntary Organisations (SCVO)

[Connecting Scotland](#)<sup>53</sup> is a digital inclusion programme, funded by the Scottish Government and co-delivered with SCVO. The scheme initially aimed to connect 9,000 households impacted by lockdown and shielding requirements, eventually expanding to reach 60,000 households by the end of 2021. Connecting Scotland provides Mi-Fi devices to low-income digitally excluded households.

MiFi devices were chosen because the solution was quick to distribute, set up was relatively easy and could support households with multiple devices. Users reported reasonably good speeds, and a portable device was more suited to client groups who were transient, including people experiencing homelessness.

This project learnt and adjusted over time; the initial 20Gb/month data allowance was upped to unlimited data when some participants reported running out. Some families faced set up challenges (such as MiFis need to be positioned high up, near a window) which the Connecting Scotland helpline (managed by charity People Know How) supported. A small number of the Vodafone SIM cards (c.5%) could not get reception in more rural areas, such as Highland areas and the Orkney Islands. In these cases, the project tried a SIM with a different mobile provider.

**“I think if we were doing it again, it probably still would be my preferred connectivity option just because of the flexibility and ease of getting it out to people. I think there’s something about the freedom to move around with the MiFi aswell. So if you’re moving house, the ease of being able to unplug it and take it with you.”** *Digital Participation Project Manager, SCVO*

Read the full evaluation for Phase 1 of Connecting Scotland [here](#).<sup>54</sup>



# Existing solutions: A comparison of different models *(continued)*

## Recommendations for scaling WiFi in a box

An ideal WiFi in a box:

- is posted or given to individuals, immediately
- is distributed via charities, community organisations and frontline workers
- has a support line to help with set up
- costs a fixed monthly amount, with no hidden uplift
- has a pause option
- has the boxes (hardware) funded philanthropically or by government
- supports geographically isolated areas with poor fixed line access
- has sufficient data allowance to support a household (ideally unlimited)

## Proposed scaling mechanisms:

- 1. An evolution of the National Databank which offers WiFi in a box devices** alongside data gifts. This option banks on existing relationships the databank holds with local organisations and telcos gifting data.
- 2. Expansion of existing organisations who provide WiFi in a box**, eg. Jangala and Hartlepower. Investment from government, philanthropic funders or angel investors could increase reach.
- 3. Adoption of WiFi in a Box model by community organisations and/or Local Authority Digital Inclusion teams**, potentially through a targeted awareness campaign.





# Existing solutions: A comparison of different models *(continued)*

## Social tariffs

- Social tariffs are more affordable internet options available to people claiming benefits. At the time of writing, there are [eight broadband social tariffs](#) on offer at the time of writing and [one mobile](#) social tariff in the UK.
- Research from Which? in 2022 found that customers eligible for a social tariff could save an average of £250 a year by switching from their current deal to the cheapest social tariff<sup>55</sup>.

### Pros:

- **Privacy:** Social tariffs provide home broadband or mobile tariffs, creating good opportunity for digital and spatial privacy.
- **Affordable:** Most social tariffs are more affordable than other internet packages, ranging from £12.50 to £20 a month.
  - **Exit fees waived:** most providers waive the early termination charge (ETC) if a customer moves from an existing contract to their social tariff.
- **Sustainable long term:** eligibility is binary, based on whether a customer claims benefits or not. This clearly stratifies groups of people who would benefit from the intervention and aligns broadband with existing ways we stratify state support in the UK.
  - **Equality:** in theory, social tariffs reduce geographical variation and increase equity of access, because providers are encouraged to offer a standard package in different parts of the country.

- **Pause available:** some tariffs offer 'pause' options to pause a contract mid-way or rolling 30 day contracts.
- **Dignity in transaction:** Some argue that there is dignity in transaction and that customers being empowered to choose a social tariff enables them to continue purchasing internet and is more dignified than gifted options.

# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Low uptake:** Research from Ofcom shows that around 4 million households receive Universal Credit, but only 3.2% had taken advantage of a social tariff as of August 2022.<sup>56</sup> Ofcom has encouraged telecoms to promote social tariffs and called on all broadband firms to offer a social tariff<sup>57</sup>. Further research is needed to understand why uptake is so low. Reasons could include:
  - **Speeds:** Which? surveyed 2,000 individuals eligible for social tariffs and 44% cited fears that the social tariff speeds was too slow as the main reason for not taking up a social tariff<sup>58</sup>. Some providers are upping their speeds and introducing secondary tariffs. See table below for detail.
  - **Lack of awareness:** 6 in 10 eligible households said they were unaware social tariffs existed<sup>59</sup> and many frontline workers are also not aware. Some politicians have attacked telecoms companies for lack of promotion<sup>60</sup>.

Service volunteers in an Age UK service in London emphasised that the process for accessing the BT social tariff had got easier in the last year, but many people still didn't know it existed. **"I don't think it's really well publicised. I don't think there's a lot of elderly people that realise that they could be eligible for this. It's a real shame."**

*Volunteer*

- **Customers must be proactive:** Currently, the onus is on the individual to find, purchase and transfer to a social tariff, not an easy process for those lacking digital confidence. Not all consumers have the resources, headspace or digital literacy to find and switch to a social tariff<sup>61</sup>.
- **Exit fees:** when a customer exits an existing contract, they often pay a large early termination charge (ETC). Many providers waive this if a customer is moving to a social tariff, but it is unclear upfront if this is the case, which may well put off eligible customers. Some providers mandate customers

can only switch to their social tariff; if they move to a competitor's social tariff, customers must pay the ETC.

- **Persuasive sales:** some people are put off switching due to the process. Customers often wait on hold for a long time, only to be offered an upgrade or special deal. Some benefit from these offers; many report feeling manipulated.
- **Stigma:** some customers object to the wording of 'social tariff' which can undermine the dignity of the transaction.
- **Accessibility:** The process of getting a social tariff can be laborious and often requires the customer to provide proof of benefit claim; another set of forms to fill out in a complex life. It is possible social barriers are decreasing access, for example if someone has learning disabilities, language barriers or poor mental health.
- **Potential lack of service:** some providers take 14 days to switch to a new provider. The idea of a gap in service may put off many people from switching. Being without internet is especially daunting if a customer relies on it for work, disability support, social connection or food shopping.

- **Unclear eligibility:** the eligibility for social tariffs vary. Some are only available to people on Universal Credit, some include other benefits like pension credits, housing benefit, PIP, and Jobseekers' Allowance. Some tariffs are only available to existing customers.



# Existing solutions: A comparison of different models *(continued)*

- **Sometimes affordable:** Only some social tariffs have pause options, and they can cost up to £25 a month. For some people, this is still a monthly bill they can't afford.

*"Fifteen pounds a month is not an affordable social tariff for the people we're talking about. For some of the people we're talking about, a fiver is a lot."* Jason Tutin, Digital Inclusion Lead, 100% Digital Leeds

- **Manual verification:** The Application Programming Interface (API) which automatically checks if a customer is claiming benefits was only recently made available to all providers, having previously been open to just BT. This delay may have led some companies to not promote their social tariffs, but greater efforts are required to mandate this promotion now that the API is available.
- **Eligibility feels straightforward, but misses key people in need:** Many people do not claim benefits due to language barriers, stigma, lack of access (the internet), asylum or immigration status and other reasons. In-work poverty has been steadily rising in the UK for the last 25 years<sup>62</sup>, and many people on low or unstable income may be as in need as those claiming benefits. Key groups who are struggling financially are not eligible and miss out on this support.
- **Price rises:** it is currently unclear how social tariffs will be affected by above-inflation price rises by telcos. In 2022, prices rose around 9%<sup>63</sup>. Ofcom allows annual price rises under certain conditions.
- **Sometimes decent quality:** many social tariffs offer very low speeds, which makes the offer less valuable for some households. Some providers are addressing this; Hyperoptic now offers two speeds of social tariff and Virgin Media O2 recently increased their speeds.

- **Geographically restricted:** many of the tariffs are only available if the network operates in a customer's local area.
- **Penalising smaller, community-focused ISPs:** some smaller challenger ISPs offer low prices and give back to their communities. If these ISPs were mandated to offer a social tariff and many customers switched, this could undermine their commercial viability. They argue this would undermine their wider ethical approach. This offers some argument that if social tariffs become mandatory, this should only be for larger ISPs.
- **Portable:** most social tariffs offer home broadband and are therefore not available. The exceptions are VOXI, the current mobile social tariff available from Vodafone, and EE.

Broadband social tariffs available in the UK (source: USwitch)

Provider	Provider	Speed	Price per month
Vodafone	Essential	38Mbps	£12
Community Fibre	Essential	10Mbps	£12.50
Virgin Media	Essential	15Mbps	£12.50
BT	Home Essentials 1	36Mbps	£15
Hyperoptic	Fair Fibre 50	50Mbps	£15
Sky	Basics	36Mbps	£20
NOW	Basics	36Mbps	£20
Virgin Media	Essential Broadband Plus	54Mbps	£20
BT	Home Essentials 2	67Mbps	£20
Hyperoptic	Fair Fibre 150	150Mbps	£25

# Existing solutions: A comparison of different models *(continued)*

## Case study - iConnect, Monmouthshire, Wales

The [iConnect Project](#)<sup>64</sup> ran for 6 months in 2022, getting people in the Monmouth Council area access to devices, WiFi, troubleshooting, SIM cards, digital skills, and cybersafety training.

When staff offered a range of options to residents; home broadband, MiFi, SIM cards, most chose home broadband. Social tariffs were easier to implement with some ISPs over others: **“the BT one is the one I've had most success with.”** *Digital Inclusion Worker*

They noted that social tariffs, although helpful, were not well known.

**“None of the service users we spoke to had heard of them. I mean, I myself hadn't heard of them until I started researching at the start of the project if I'm honest. They are not very well advertised.”**

*Digital Inclusion Worker*





# Existing solutions: A comparison of different models *(continued)*

## Recommendations for scaling social tariffs

### An ideal social tariff:

- is available to citizens claiming key benefits, including Universal Credit, Personal Independent Payment (PIP), Housing benefit, Pension Credit, Jobseeker's Allowance
- does not incur exit fees from current contract and is clear with customers upfront that this will be waived
- has a clear, accessible switching process (ideally a switching service) available online and offline
- allows customers to move freely between providers
- is well known amongst the public and frontline professionals
- is affordable; costs the user proportional to their income
- is cost-shared between government and industry
- has reasonable speeds (in future this could be defined by the Minimum Digital Living Standard)
- for mobile social tariffs, data allowances should be high; some may be using as primary access

## Scaling mechanisms:

### Level 1: Awareness schemes to empower customers to switch:

- **Mandatory checks and awareness:**
  - During any customer conversation, a telco could check if a customer is on benefits and eligible for a social tariff.
  - Telco websites, when comparing tariffs, could be mandated to show the cheapest options online, including social tariffs.
  - Telcos could have to commit to a level of marketing for social tariffs.
- **Standard information and options from UC/DWP:**

When a citizen signs up for Universal Credit or any other benefit, they could be automatically informed of social tariff options.

### Level 2: Proactive methods to increase uptake

- **Switching service:** an internet switching service could reduce friction to switch, either for broadband and mobile services, including to social tariffs. Companies like [Nous](#) are already offering this and [One Touch Switch](#) offers the beginnings of this.

- A dedicated team in UC could focus on getting eligible people on social tariffs as part of the benefits service.
- Social tariffs could be built into social housing (see section on Social Housing).

### Level 3: Systems shifts:

- **Opt out:** Social tariffs could be opt out, so that when a citizen claims benefits, they are automatically enrolled in a social tariff. Although this might seem unusual in a competitive market, opt out has been demonstrated to have high social impact, for example in organ donation and pensions.
- **A government-owned ISP** set up to deliver social tariffs, with its own outreach to deliver to benefits claimants.

# Existing solutions: A comparison of different models *(continued)*

## SIM card distribution

SIM card distribution has grown over the pandemic. SIM cards can be pre-loaded with data, calls and minutes, or topped up with vouchers, which are given directly to the individual facing data poverty.

### Pros:

- **Private:** SIM cards are registered to an individual (usually) and therefore generally provide a private connection. This doesn't account for device sharing.
- **Quick to access:** SIM cards can be distributed and set up quickly. Community organisations can apply for SIM cards through a simple online process, resulting in a low burden on community. Organisations and easy in-person or postal distribution to individuals.
  - **Eligibility:** There is no need for benefits paperwork or proof of need. Community organisations can make a swift judgement call on whether a person in front of them would benefit.
- **Affordable:** SIM donation is often free to the user.
- **Plug and play:** SIM cards can be easily inserted into an unlocked mobile device and set up by frontline workers with low digital skills. Or, an effectively value-less SIM card can be topped up with a voucher, with an online process.
- **Portable:** SIM cards can be used in smartphones and tablets and do not require fixed accommodation.
- **Gifting:** SIM cards are cheap and therefore generally gifted alongside a device. This requires less administration and process than loaning and reduces complications of liability and privacy.



# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Eligibility:** customers must be 18+ to access most databanks.
- **Sustainability:** SIM card offers are usually time limited; around 6 months. Although there are sometimes renewal options, SIM card distribution tends to be a bridge, leaving users without internet when the time limit expires.
  - **Frontline worker confidence:** A key success factor is the confidence and skills of community workers advising a customer to get a SIM card and helping them set up. Reports of community organisations overestimating distribution and lacking confidence means some SIM cards are stockpiled locally, unused.
- **Plug and play:**
  - **Accessibility:** Insertion and set up is fiddly for anyone with mobility issues or arthritis. Many customers need support from a frontline worker to set up a SIM and phone.
    - Different telcos also provide different processes for activating data each month, which creates friction for users with low digital skills. Frontline workers report that trouble accessing the voucher top up process puts many people off.
    - The process for transferring your original number through a PAC (Porting Authorisation Code) is cumbersome and especially difficult for a user with limited digital literacy.
  - **Process:** Prepaid SIM cards usually need to be registered to an individual; the burden of this is usually put on frontline workers, who must manually insert and register each SIM card before distribution to a customer, or who need a live set up session with the customer to make it usable. Where a charity or community organisation registers the SIMs to the organisation, there is some liability risk and it's harder for individuals to check their data allowance.
  - **Complexity:** Different telcos offer different combinations of data allowances, calls and minutes and different redeeming processes, which adds a layer of complexity in effective distribution. This also creates complexity for frontline workers to navigate, in understanding what packages are available and relevant, and explaining this to potential customers.
- **Sometimes decent quality.** Some rural organisations report poor signal from donated SIMs. Donation schemes tend to get round this by establishing which provider has the strongest signal and only sending SIMs from that provider to that geographical region. Some people report running out of data, but data allowances have been increased in key instances of this model, creating better access.

# Existing solutions: A comparison of different models *(continued)*

## Case Study – National Databank

[The National Databank](#)<sup>65</sup> was formed in June 2021 by Good Things Foundation in partnership with Virgin Media O2. Vodafone and Three have since joined. In July 2022 Virgin Media O2 pledged a further 15 million GB of free data to the databank.<sup>66</sup> Since its launch, the databank has issued more than 50,000 SIMs.

The Databank creates a supply chain of SIM cards from mobile internet providers to local community organisations, who distribute to customers on the ground. This is more efficient for providers and community organisations, who can channel SIM distribution from a centralised source and get them directly to people who need this support most. It is easier for telcos to work with one national organisation, instead of forming individual relationships and implementation processes with schools or charities, although this still occurs, such as to homelessness charities<sup>67</sup>.

Originally around 3-5GB, the SIM cards now offer 15-20GB a month. Even though not all users use the full allowance, this offers flexibility and peace of mind.

Reports from organisations using the databank are highly positive. Frontline workers appreciated the simplicity of ordering the cards through an online platform (built by Virgin Media O2) and the ease of giving them out. The Databank sits alongside the [National Device Bank](#), which refurbishes and distributes devices to people in need and [Learn My Way](#), free online digital skills courses for beginners.

## Case study - Lifeshare, Manchester Digital Collective

[Manchester Digital Collective](#)<sup>68</sup> (MDC), a network of organisations hosted by charity Lifeshare, distributes SIM cards to local clients; individuals facing homelessness and social barriers. They offer a 30 minute set up session to help clients get used to their device (smart phone or button phone) and basic digital skills support.

The scheme results in improved engagement with services; it gives case workers a way to contact clients and encourage them to come in for appointment filling out passport forms, identity forms or support work. It also builds trust with the client by helping reduce their social isolation. Interestingly, MDC provides a paper map of WiFi hot spots in the local area, flagging how often their clients rely on a combination of mobile data and free WiFi.



# Existing solutions: A comparison of different models *(continued)*

## Case study - Chipping Barnet Foodbank

[Chipping Barnet Foodbank](#)<sup>69</sup> runs food bank session twice a week. A holistic service, they have distributed around £50,000 worth of fuel and supermarket vouchers and around 600 SIM cards since January 2021. They also channelled SIM cards to refugees through a local charity.

The SIM cards come from Vodafone, who has a national partnership with The Trussell Trust. Chipping Barnet is one of 428 UK foodbanks linked to The Trussell Trust.

With a small core team and a bank of volunteers, the food bank team provides a robust and equal service regarding food parcels but struggles to support everyone with issues underpinning foodbank use. They expressed that they wished they could sit down and help people get set up and offer digital skills.

**“It’s difficult to suggest they go onto a [digital skills] café with a child in a pram who doesn’t have any nappies on”.**

Instead, they would love to have someone on site, **“If I could have the SIM cards at the food bank, and that person could set someone up there and then with a phone and a SIM card, that would be incredible.”** *Foodbank volunteer*

## Recommendations for scaling SIM card distribution

An ideal SIM Card distribution model:

- uses a National Databank model, enabling local communities to help local people whilst using national partnerships with telcos to ensure good value
- has support at distribution point to help recipients get set up their device
- has champions in each community distribution site with high digital confidence to promote the service
- uses a simplified PAC process (industry-led)
- has high data allowances
- does not include time limits to data access

# Existing solutions: A comparison of different models *(continued)*

## Social housing

Social housing collaborations create affordable home broadband options for social housing tenants. If internet is considered a right and a utility, there are arguments for treating it more like water or electricity.

Approaches vary; some projects try to create a contract between the Internet Service Provider (ISP) and the social housing provider. Other projects work with Social Housing Providers to endorse a set of tariffs and encourage trust among tenants to switch. Current projects include fixed line and mobile offers.

HACT and Hyperoptic's report on [The Future of Social Housing](#) documents many of the future possibilities well<sup>70</sup>.

### Pros:

- **Private:** if set up in the right way, social housing options can offer a safe and spatially private connection.
- **Reaches a key demographic:** because data poverty intersects with social inequality, many of the groups accessing social housing are also facing data poverty and have a delineated audience for marketing campaigns.
- **Sometimes decent quality:** depending on the agreement with the ISP, fixed connections broadly offer better options but speed throttling on cheaper tariffs can reduce the quality for the individual.
- **Highly sustainable:** implementing connections to existing infrastructure now helps pave the way for future generations' needs. For mobile connectivity, using social

housing infrastructure for masts or cells could help accelerate much needed 5G infrastructure, especially in cities. New social housing developments could have fibre connections built as standard, to be fit for the future.

- **Internet of Things (IoT):** social: Smart social housing offers increased independent and safety in assisted living. Wearable smart alarms help those with health problems or a fall risk. Door sensors alert carers when a person with dementia leaves the house at 3am. A voice activated assistant can remind someone to take their medication.
  - **Internet Of Things (IoT) Environment:** Smart social housing offers environmental benefits; collective temperature management, shared solar panels, smart meters and beyond.
  - **Potential reach to forgotten areas:** where social housing is in a more deprived area of a community, installing the infrastructure can create secondary benefit to the surrounding houses and communities by opening up higher speeds at a lower price.
  - **Attractive prospect to internet providers:** partnerships between telcos and social housing take advantage of demand aggregation, increasing the commercial attractiveness of building infrastructure. This is more true for tower blocks in urban areas and less true for dispersed properties in rural areas.
- **Improved maintenance set up:** tenants with a good connection can log maintenance problems and liaise more easily with their housing provider.



# Existing solutions: A comparison of different models *(continued)*

## Cons

- **Privacy and liability:** when a third party organises internet on a user's behalf, there is increased risk of privacy infringement. Some social housing providers offer a rental discount if tenants agree to 'sell' their data, collected in daily living habits. Others limit or monitor use in exchange for a lower tariff. Some ISPs have refused to work with Housing Associations because the Association wanted monitoring and control over the use of internet to a degree that threatened to breach privacy, net neutrality and the rights of the citizen.
- **Not quick to access:** building an ecosystem of relationships that enables collaboration between social housing providers and telcos takes time, often years. As a long-term investment, this may be worth the return, but in the short term it is not a quick win.
- **Not portable:** by definition, this connection is fixed to the property, which can be less useful to tenants who must unexpectedly move on.
- **Sometimes affordable:** Even a social tariff can be too expensive. For some people £15 per month is unaffordable.
- **Sometimes plug and play:** Projects using mobile signal can encounter problems: a project which installed a mast on a towerblock failed because of problems amplifying signal, resulting in unstable, slow connections.
- **Uptake:** current versions of social housing provision puts the onus on the resident to switch to a new tariff. This means people with complex lives are being asked to navigate a complex decision making and switching process.

# Existing solutions: A comparison of different models *(continued)*

## Case Study – Greater Manchester Combined Authority Social Housing

Greater Manchester Combined Authority (GMCA) has facilitated Europe’s biggest [social housing connectivity pilot](#)<sup>71</sup>. Five internet providers are working with five local social housing providers to test connectivity methods.

The pilot, started in January 2022, offers 5,000 local people improved or more affordable access to the internet. The target groups vary; over 75s, care leavers, people with a disability, people facing unemployment, with evaluation from the University of Liverpool.

For fixed line providers, tenants hold a contract directly with ISPs, which is a far quicker and easier method than the Housing Providers contracting with the telcos. This allowed the teams to move at speed; the partnership aims to instil trust in tenants that switching will benefit them.

What is notable is the facilitating role of GMCA; by bringing partners together and facilitating questions they are helping to build trust and education on both sides. Social Housing providers are understandably protective of property assets, and telcos can have limited resource to work through complexities of a project. This intentional collaboration has resulted in a foundational pilot, which will expand into a growth phase.

Currently, uptake is the biggest challenge. Residents are more likely to engage with promotions which are backed by the social housing provider and/or local authority, but even attractive packages have received limited take up. What’s most notable is GMCA’s sophisticated approach to the broader problem:

**“We see digital exclusion as a facet of broader social exclusion. We understand that digital inclusion should be considered a basic human right in an increasingly digital world. And we also understand that connectivity is a basic utility.”**

*Beena Puri, Digital Innovation and Partnerships Lead, GMCA*



# Existing solutions: A comparison of different models *(continued)*

## Recommendations for scaling social housing

An ideal social housing project:

- provides internet contracts directly between resident and ISP, to protect privacy
- offers easy adoption/switching
- is genuinely affordable
- uses market forces to create commercially appealing opportunities to telcos
- is promoted by trusted local figures (to tackle consumer distrust)



# Existing solutions: A comparison of different models *(continued)*

## 5G Community WiFi

### 5G context

5G is the current generation of mobile connectivity. It offers high speeds (roughly 100 times 4G), low latency (a video call or live music will appear closer to real time) and more capacity for data transfer than 3G or 4G networks\*.

5G offers new opportunities for connectivity via the internet of Things (IoT) and Smart living. This means homes, businesses and communities can connect everyday objects to the network to provide real time information from sensors, alarms or monitoring devices. The 5G testbed pilots by the UK Government trial ways 5G can link business, music, emergency services and beyond<sup>72</sup>.

**5G Community WiFi** is an emerging model, where a community organisation, council or partnership sets up a private network available to local people. This is often done using a mesh network, where the devices or nodes create a mesh of connectivity. Mesh networks are considered more resilient and wide-reaching than traditional hub and spoke models.

### Pros:

- **Affordable:** Community 5G Networks can offer free internet to users at home, which means people who cannot afford the cheapest broadband or mobile packages can still be online.
- **Sometimes decent quality:** 5G has high speeds and low latency. But the distance between nodes, building lay out and how the devices are configured play a part in

determining the connection. Simplistically, larger networks can dilute the signal, reducing the quality for the user.

- **Plug and play:** individuals who access a community network do not need to arrange installation; it is provided by the community partnership. This lowers barriers to entry.
- **Sustainable:** Smart options: 5G networks are developing as a better way to adopt the internet of Things (IoT); ie. connecting everyday objects to the internet. IoT offers huge opportunity for semi-independent living (see previous Social Housing section).
- **Quick to access:** 5G offers the potential for home internet via mobile networks, which, once set up, can be quicker and easier for users to adopt (see WiFi in a Box).

\* Because the download and uploads speeds of 5G are so much quicker, it offers the possibility of providing ultrafast broadband to a home with multiple users.



# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Privacy:** privacy levels in these models are unclear with potential monitoring and limitations on the network connection if they are arranged by a third party. In one example of this model, individuals were given devices where privacy settings could be configured at a device level. This creates a risk of accidental privacy infringement or slippage in the rights of individuals using the network.
  - **Content filters:** One example of this model installed content filters on the networks, filtering pornography alongside illegal content. Whilst the desire to keep citizens safe is understandable, this sets a worrying precedent on freedom of access and internet neutrality. In building towards a digital equitable future, solutions which limit sections of the internet, even with good intentions, are at risk of infringing individual rights.
- **Not affordable:** when local communities create a new network, it involves many actors, agencies, large-scale funding and commitment. In future, as 5G becomes more common place, these costs may be reduced.
- **Sometimes plug and play:** 5G uses a smaller wavelength and so needs nodes positioned relatively close together. Extensive planning is needed to ensure nodes are positioned accurately to generate strong enough WiFi signal for home use. This involves high technical expertise, good planning, and public permission processes. This could change in future years, for example when more spectrum is released via 3G decommissioning.
- **Not quick to access:** Community 5G Networks need strong partnership working, public permission, planning and high technical expertise. This could reduce in future years, but currently testbeds are taking longer than predicted to come to fruition.
- **Infrastructure:** Unlike cable which runs beneath the ground, mobile requires masts positioned high above ground to reduce interference from other buildings and trees\*. Building owners and local people often object to the masts, making it harder to develop infrastructure. Central Government have attempted to [accelerate](#) 5G mast development but faced barriers<sup>73</sup>.
- **Misinformation:** 5G has been subject to widespread misinformation. COVID-19, cancer, broader health concerns, cybersecurity and aviation have all been linked to 5G.
- **Health concerns:** 5G operates using non-ionizing radiation, the same as 3G and 4G\*\*. The WHO (World Health Organisation) has declared it safe<sup>74</sup>. However, scientists are challenging the lack of long-term studies on 5G, particularly in dense urban areas, and the lack of independent studies (studies are largely privately funded).

\*In rural areas, masts can be a few miles away and in urban areas much closer, sometimes a few metres.

\*\* The key difference is that 5G has a smaller wavelength and so operates at a slightly higher frequency.

# Existing solutions: A comparison of different models *(continued)*

## Case study - Liverpool 5G Health and Social Care Testbed

Delivered by a consortium of 15 partners, the [Liverpool 5G testbed](#)<sup>75</sup> created a privately owned 5G mesh network in Kensington, Liverpool between 2018-19. Using nodes (devices) attached to council-owned lampposts and other buildings, they used the City Council fibre network which links to CCTV as the backhaul (the link to the global core network).

The project combined mmWave technology with WiFi and LoRaWAN networks (low data networks) to offer both smart options and home WiFi. Through this, they built a network in one of the poorest wards in Liverpool so most houses could access free WiFi.

The project was funded by DCMS and had £4.9m of initial funding focused on health and social care. The project reduced medicines mismanagement, decreased loneliness, boosted telehealth and used sensors to monitor assisted living residents and reduce hospital admissions.

Liverpool 5G report implementation of this work could see a £247,688 saving per 100 users. Their evaluation [reports](#) are highly valuable, especially in assessing the impacts of Smart networks in health and social care settings.

## Privacy and rights in donated data and devices

One of the key reasons 5G Community WiFi is not being recommended as a solution in this report is because of the risk to privacy, rights and net neutrality. Net neutrality is the principle that you control what you see and do online, not the provider that connects you to the internet<sup>76</sup>.

Where devices or data is donated, organisations often put limits on what people can access; the dark web, pornography, gambling. Where children are concerned, there are legitimate reasons to limit access. But for adults with capacity, protectional limits can be incredibly damaging in affecting that person's autonomy, freedom and self-expression.



# Existing solutions: A comparison of different models *(continued)*

## Mini case study: Fatima

After leaving care, Fatima\* describes how she was given a laptop by her Local Authority. If she typed in certain words, 'weed', 'suicide', the system pinged her Personal Advisor. She eventually gave the laptop back, saying she couldn't face the stress of being watched. **"I understand they're there to protect you, but at the same time, it's prying... It's that thought of big brother watching you, that's how it feels."**

Any private network which offers free WiFi must be set up with strong and transparent processes so that citizens have private access, and they know that access is private. This is important to their health, wellbeing and human rights.

My recommendation to any organisation, charity or Local Authority who is offering or considering free internet access through networks or devices is to focus on whether they are mitigating risk or discomfort. Filtering illegal websites mitigates risk. Filtering pornography or gambling mitigates discomfort. Content filters are inappropriate in most situations; in a digitally equitable world, adults with capacity must have their choices protected, even if that means an uncomfortable level of risk.

Charitable organisations in the UK have mitigated these perceived risks successfully. Smaller organisations might consider partnering with larger ones, who can afford legal advice. Where the risks feel too high, organisations should consider other solutions to data poverty. Privacy is not a price anyone should pay for free access.



# Existing solutions: A comparison of different models *(continued)*

## 5G Community WiFi

### Recommendations for scaling 5G Community WiFi

Currently, 5G Community WiFi is not ripe for scaling. Although it provides free home WiFi, it currently has high costs to set up, variable success due to speed limitations of mesh networks and issues around privacy and content filters. Where these concerns are addressed, this could be a powerful model in future.

#### An ideal 5G community WiFi model:

- proactively addresses community concerns about 5G
- realises the benefits of IoT/Smart living alongside free WiFi
- creates strong privacy options for users accessing the network as home WiFi; users must be able to have private, safe connections
- is focused around a specific area of benefit, eg. health and social care.





# Existing solutions: A comparison of different models *(continued)*

## Community fibre providers

### Context: fibre infrastructure

Fibre infrastructure is sometimes described as a one-hundred-year investment. Fibre has greater data capacity than copper cables or mobile spectrum. This means the infrastructure being laid now – fibre cables along the street and under fields – are unlikely to need an upgrade for some time despite our data demands increasing\*. Fibre also supports mobile infrastructure because mobile masts are connected to fibre network for backhaul.

Full fibre, or Fibre to the Premises (FTTP) offers fibre cable right to the house or business. Fibre to the Cabinet (FTTC) uses copper or similar between the street level cabinet and the house or business, which is comparatively slower. Full fibre connections tend to reduce latency.

\*The ecological and environmental impact of increasing data consumption is not explored in this paper, but should inform future study.

## Community fibre providers

Most of the fibre network in the UK is held by Openreach (a legally separate arm of BT), Virgin Media and City Fibre. Challenger providers are gaining a foothold; Hyperoptic, Gigaclear, Jurassic, Airband, Community Fibre and B4RN, among others.

These 'altnets', are often backed by large private investors<sup>77</sup> with an estimated £15bn having been invested in the most promising UK challenger networks<sup>78</sup>.

Some providers are emerging from within communities, championing community needs and shaping their business model around the specific needs of rural locations and complex geographies.

Community network providers are filling a key gap in provision, especially in rural areas where the outlay to lay down infrastructure is unattractive to larger networks. 'Community Fibre Providers' include for-profit and non-profit organisations, who put community needs as a key mission of their work.

# Existing solutions: A comparison of different models *(continued)*

## Pros:

- **Private:** this solution offers spatial and digital privacy through home WiFi.
- **Affordable:** challenger community providers often offer affordable products at a fixed price. Many commit to no mid-contract price rises.
- **Decent quality:** most community-led fibre providers offer full fibre connections, with super high speeds and low latency.
- **Sustainable long term:** Effective for remote, rural areas: Community fibre providers develop creative ways to overcome the commercial challenges of rural connectivity. Larger network providers often resist laying down network infrastructure to single properties or rural hamlets because the potential return on investment is low. Community providers find ways around this; some negotiate reduced wayleaves, rely on volunteers or build good council relationships. Most use subsidy vouchers from the government, specifically designed for this purpose. Importantly, they get people connected who otherwise would not be.
- **Good maintenance:** because community fibre providers are based in the communities they serve, the rare occasions where there is a problem sees quick reconnections. Providers cited Storm Eunice (February 2022), where community providers fixed problems within 2-6 hours, whereas customers with larger networks were left without connectivity for over a week.
- **Pairing with community skills needs:** most community fibre providers run an ISP as part of their service, and many provide digital skills cafes and local engagement events. They encourage disconnected people to become connected.

- **Stable:** Fibre is the most stable form of internet we have; satellite can be disrupted by weather, mobile connections are dependent on signal reach and spectrum limitations. Rare dropouts are caused by storms where tree roots lift fibre cables out the ground but cabinets require minimal maintenance and contamination problems are rare.
- **High speeds and low latency:** Fibre connections offer high speedy and low latency, improving the experience of shared household use, classroom learning, working from home, streaming, or activities which reduce social isolation\*.

\*The quality of fibre connections are generally dependent on domestic set up - distance, wall thickness, router quality, repeater set up



# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Not quick to access:** the time between starting a community project and receiving a fibre connection to your home can be around 6-36 months. This is a long-term investment.
- **Sometimes pause available:** some community network providers offer mid-contract pauses, but not all do.
- **Not plug and play:** installation is complex and can require building adjustments.
- **Not portable:** installations are fixed to the property.
- **Resource:** some existing community models rely heavily on skilled, highly motivated volunteers, which may make it harder to replicate and scale.
- **Commercial viability:** it takes a determined organisation to make the financial model stack up. However, the UK government's commitment to get 99% people fibre connections by 2030, subsidy schemes are making this more possible\*.
- **Bureaucracy:** the overall thrust of [Project Gigabit](#) – a £5bn government infrastructure subsidy for rural fibre – is strong and much needed. However small businesses may be ill-equipped to deal with the hefty bureaucracy and legal advice needed to navigate the schemes.
- **A window of opportunity:** fibre will only need to be laid this way once, which means there is a window in which altnets can flourish, by meeting unmet demand and laying fibre now. Some comment networks will ultimately reach consolidation, resulting in at most four network operators in future<sup>79</sup>.

\*To connect rural Alaska, GCI unlocked millions in federal funds to [replace satellite with fibre](#).

# Existing solutions: A comparison of different models *(continued)*

## Case study – B4RN, Lancashire

Founded in 2011, [B4RN](#)<sup>80</sup> (pronounced ‘Barn’) is a community fibre network which now serves more than 10,000 people with full fibre connections. Their focus is on connecting communities who were geographically too far out to be included in the network reach of bigger network providers. Groups of volunteers get together to plan fibre routes, liaise with landowners (often farmers), and eventually help dig and lay the fibre cables.

What started in a single community has spread slowly but surely across the local area and beyond. **“Every community looked next door and said we want a piece of that.”** *B4RN volunteer.*

B4RN does not offer graded tariffs. If you connect with B4RN, you pay £33/month for a full gigabit connection (one gigabit upload and download). The core team build the cabinets from scratch and work with contractors and volunteers to reach each house, including those three miles up a hill that seem impossible to connect.

The areas B4RN move into have notoriously poor connections. One local reported a daily 90 minute drive to find a connection good enough to upload a day’s office work. Families with poor connections compete for bandwidth; one schoolchild was told off by a teacher for uploading homework at 11.30pm, before explaining that this was the only time of day she could get the speeds.

These are sometimes areas that technically have coverage under the standards of Universal Service Provision. But the reality of actual speeds, latency and experience often don’t match the national coverage statistics.

**“Some of the people that I connected...[were] living five or six miles away the end of a very long piece of telephone wire. They’d get one megabit connection on a good day.”** *B4RN volunteer*

Good connections are game-changing for local people. Families no longer have to take turns sharing internet. Farmers can work instantly with their suppliers and contractors, check stock instead of doing masses of paperwork, slowly, by hand. It’s encouraging local people with farmland to branch out into new revenue streams, such as camping pods and bed & breakfasts.

**“It’s been a lifeline for me, in some respects, [during] lockdown in particular. I think it’s made a huge difference and a huge difference to the way [local people] can run their lives. Reliable broadband service changes the way that some people around here are thinking about what we do.”**

*B4RN worker*



# Existing solutions: A comparison of different models *(continued)*

## Case study – Wildanet, Cornwall

[Wildanet](#)<sup>81</sup> is an alternative network with a social and ecological purpose. Based in Liskeard, Cornwall, Wildanet provides gigabit cable broadband coverage for remote areas which larger providers won't cover.

Wildanet are for-profit and have received over £50 million of investment. They connect community hubs for free, such as local churches, and have committed to customers to fix their prices for two years.

Wildanet sees digital connectivity as a way to overcome poverty and make sure people are not socially excluded. They advocate for how connectivity can create jobs and help boost the local economy, to prevent young people leaving.

Cornwall has five times the number of people on Universal Credit as the national average and **“62,000 people in the county over the age of 16 has never turned on a PC. That’s 10% of the population.”** *Wildanet employee.*

Their service offers a ‘world-leading gigabit capable fixed wireless access network’, which means for remote locations they can put in connectivity right away using mobile access, and then build fibre to the premises. This gives them time to apply for government voucher schemes, negotiate with land owners\* and lay fibre infrastructure over complex land (granite; radon gas; water).

\*Around 34% of Cornwall is in private ownership and 31% is in farming. Community engagement is a key way to develop fibre connections and support 5G infrastructure.

**“62,000 people in the county over the age of 16 has never turned on a PC. That’s 10% of the population.”**

*Wildanet employee.*

# Existing solutions: A comparison of different models *(continued)*

## Community fibre providers

### Recommendations for scaling community fibre

#### An ideal community fibre model:

- is rooted in the community which it supports
- has strong local ties
- is supportively subsidised by government schemes, with reduced bureaucracy
- contracts easily and at a fair price with existing networks

#### Scaling recommendations:

- Continue to make market more hospitable to challenger providers (see healthy ecosystem recommendations above)
- Streamline Project Gigabit and voucher schemes to reduce bureaucratic burden on challenger providers.
- Continue to ringfence communities from larger framework procurements so that they are open to community fibre providers.





# Existing solutions: A comparison of different models *(continued)*

## Challenger internet service providers (ISPs)

Challenger ISPs are smaller providers who offer a service directly to customers. Challenger ISPs tend to contract either directly with network providers or with a larger ISP.

Challenger providers in other sectors have been shown to drive up quality in a service, often focusing on customer experience. Monzo, Revolut and Starling Bank focused on customer experience and pre-empting customer needs in the banking sector<sup>82</sup>. This can raise the bar for other providers and improve quality of provision across the board.

### Pros:

- **Private:** home WiFi is usually digitally and spatially private.
- **Sometimes quick to access:** because challenger ISPs are focused on customer service, some offer dongles as a temporary access bridge during installation.
- **Sometimes decent quality:** most challenger ISPs offer good speeds and data packages. Sometimes, they are at the behest of network availability.
- **Affordable:** many challenger ISPs fix their prices, in response to the frustration of many customers that ISPs increase costs annually above inflation without warning or ability to object. However, some network arrangements can mean higher installation costs, resulting in higher pricing.
- **Fewer tariff options:** many challengers offer fewer tariff options. There seems to be growing recognition that speed throttling is an artificial restriction and community-focused providers reject complex tariff structures in favour of simplicity, transparency and trust with their customer.

- **Giving back:** challenger providers tend to have a community-focused element as a central part of their business model, whether that's connecting community centres, donating a proportion of profits or donating connectivity.

### Cons:

- **Not quick to access:** due to challenges around renting network licenses, transfer to challenger ISPs can take a long time with complex installation processes.
- **Sustainable long term:** arguably, challenger ISPs are not sustainable, as they will likely be acquired by larger companies long term.
- **Financial stability:** smaller providers are less financially stable than larger ones. In industries like energy, this has played out negatively for customers and the industry at large when some smaller providers became insolvent.
- **Competitive edge:** some of the larger ISPs make portions of their revenue from loyalty penalties, network charges and strong sales techniques. In valuing transparency and trust with their customer, challengers can face a disadvantage in current industry practices.
- **Layering:** ISPs which pay a larger ISP and a network are paying for layers of service provision, which can result in thin margins and greater risk of supply chain issues.
- **Sometimes pause available:** mid contract pauses are rarely available.
- **Not plug and play:** transfer to challenger ISPs can be a lengthy process involving new network installation.
- **Not portable:** generally fixed to the property.

# Existing solutions: A comparison of different models *(continued)*

## Case Study - EnableNet

[EnableNet<sup>83</sup>](#) is the first not-for-profit social enterprise Internet Service Provider in the UK. For every ten customers that sign up, EnableNet donates a 12 month package to individuals who couldn't otherwise afford a service. They recently connected a safe house for Fife Women's Aid.

EnableNet is based in Fife and their aim is to reach 1% of the Scottish market. They see a gap for socially-driven internet which isn't about profits. As a small ISP however, they face challenges. Network operators charge premium rates to micro-ISPs; larger ISPs receive discounts through economies of scale. Customer who consider switching are often offered TV packages, increased speeds or reduced rates from market-dominant ISPs, which smaller ISPs can't compete with.

EnableNet is currently exploring partnerships with housing associations and is being incubated by FirstPort Scotland's LaunchMe programme, a social enterprise accelerator.



# Existing solutions: A comparison of different models *(continued)*

## Challenger Internet Service Providers

### Recommendations for scaling challenger ISPs

#### An ideal challenger ISP:

- focuses on customer experience, bringing in accessibility and transparency as a key concern.
- raises the bar for quality of internet provision.

#### Recommendations for scaling

- ensure market mechanisms incentivise new challenger ISPs, such as capped network and ISP charges to micro-ISPs.



# Existing solutions: A comparison of different models *(continued)*

## Community centres and libraries

Community centres up and down the country provide a trusting place for people to get online. The Good Things Foundation [Online Centres Network](#) has thousands of local and grassroots organisations. This includes village halls, cafes, social housing, pubs, bingo halls, community centres and public libraries.

This [report](#) by the Oxfordshire Digital Inclusion Project explores the role of libraries in bridging the digital divide<sup>84</sup>.

### Pros:

- **Affordable:** most community centres offer free Wi-Fi. For some people, these spaces are the only way they can access essential services, such as getting a parking permit, finding council housing, applying for work or accessing email.
  - **Trusted place:** Community centres are often run by local people and create a space of trust for citizens who may be lacking digital confidence. They can form a needed life long learning hub for citizens<sup>85</sup>.
  - **Eligibility:** lots of community centres are open to local people and don't require referrals or eligibility to be involved.
- **Meet people where they are:** the best versions of this model have local people who can meet people where they are. This this often means having a chance with someone about their interests, worries or hobbies, building trust, and then gently offering online support. Many offer digital skills programmes and ad hoc support which can be tailored to individual needs.
  - **Locally-driven:** Every community is different. Local community centres benefit from volunteers with insight into local challenges.
  - **One stop shop:** Community centres can have devices, internet access and skills training, which offers a rounded package of support. Volunteers and digital champions spend time helping local citizens understand how to use technology as well as offering tips on how to be safe.



# Existing solutions: A comparison of different models *(continued)*

## Cons:

- **Spatial privacy:** Most community centres and libraries have open rooms where people can use the internet. This is only appropriate and useful if it is supplementing home internet. Our online lives are intimate and private. If essential services like GP consultations and mental health support are offered online first or only online, anyone accessing them needs spatial privacy to benefit.
- **Digital privacy:** Citizens who put personal information onto a shared network put themselves at risk and may not realise their actions. This can be mitigated by using a VPN (Virtual Private Network), but local volunteers, library staff or citizens often lack the knowledge and confidence to do this.
- **Sometimes decent quality:** Speeds and latency vary widely across community-based access.
- **Quick to access:** most citizens must travel to reach a library or community centre. For some, this is more convenient than others. Some participants reported travelling daily to fill in Universal Credit journals, and their daily schedule depending on this access.
- **Limits:** some community centres are open with free Wi-Fi but some, such as libraries, put time limits on computer usage.
- **Convenience:** UK citizens are regularly asked to use essential services online, such as filling in journals for claiming Universal Credit. This is the list of tasks they have to complete, and some citizens are asked to check this regularly to get messages from their work coach. Travelling to and from a community centre is an added burden for local people, especially in rural areas.

**“My real WiFi access, particularly when I was homeless, was going to the local library, applying for housing or medical appointments and stuff. I’d be like oh god, I’ve only got a limited amount of time. There was a lot of personal information in a public space on a public computer and you know, I didn’t particularly know how secure it was. You’ve got someone stood behind me going, you’ve got five minutes left. I found it actually quite humiliating.”**

*Lived experience participant*

# Existing solutions: A comparison of different models *(continued)*

## Case study - Discover Digital, Staffordshire

[Discover Digital](#)<sup>86</sup> (DD) – a partnership of charities, a CIC, a college and two universities – developed effective community outreach through a test and learn approach.

What started as a structured course on digital skills quickly became informal. They set up a pop-up shop in a local shopping centre, which allowed people to drop in and ask for the support they needed – send an email, add an attachment, access podcasts, use Photoshop. This proved to be much more effective in addressing different skill levels.

Similarly, by running digital skills workshops in mental health centres, they reached people who would be too anxious or uncomfortable to travel to a shopping centre or new location.

## Recommendations for scaling the community centre model

### An ideal community centre:

- is an enabling function only, alongside home/mobile access
- offers ad hoc support across a range of digital skill level
- offers a trusted place to build online confidence
- meets people where they are; ideally engaging on a topic other than digital
- works with volunteers and trusted local leaders
- is easily physically accessible
- offers spatially and digitally private connections
- has champions with strong cybersecurity skills



# A note on zero rating

Zero rating means a citizen can visit a website without using up their data allowance. During the pandemic, many NHS, Gov.uk and educational websites were zero rated. Zero rating has advantages; it makes some access to essential services closer to being free. But this research suggests it can only really be a bridging mechanism within a shift towards digital inclusivity for all.

## Why?

- **Most essential services are more than key websites.** Making nhs.uk helps increase healthcare access. But it does not create access to GP websites or apps, public health information, support forums, mental health advice or a video calling platform needed for a medical consultation. Free access to UK healthcare is more than nhs.uk. This is true of other state services.
- **Zero rating challenges net neutrality.** Net neutrality is the principle that citizens control what they see and do online<sup>87</sup>. Zero rating can create artificial preferences for some sites over others.
- **Private companies sometimes zero-rate in exchange for data mining.** This means it is still costing the user, but in ways they may not understand, or cannot afford to object to. Our privacy shouldn't hold a price tag.
- **Zero-rating doesn't tackle the source problem or offer sustainable solutions to digital exclusion.** Zero rating only makes sections of the internet available; it can only be a stepping stone on the journey toward equitable access for all.

# The role of local authorities

Local Authorities play an essential role in increasing UK digital inclusion and tackling data poverty. Here are some top recommendations for LAs and Digital Inclusion Teams wanting to tackle data poverty, in the context of squeezed budgets and competing priorities:

- **Make digital inclusion part of every department's strategy and/or objectives.** Inclusion is a cross-cutting issue which will help every department achieve its goals. In the same way equity, diversity and inclusion (EDI) is everyone's responsibility, digital inclusion is too (see the [Welsh government's digital strategy](#) for a strong approach).
- **Be facilitative:** the digital inclusion team's role is connective, bringing together local community organisations, charities and services to improve collaboration and therefore outcomes.
- **Find strong leadership** to help with stakeholder engagement, securing funding and championing it as a priority.
- **Do not conflate with IT:** Although strong links are needed with IT departments, the goals of these teams are not the same and budgets cannot be pooled without losing impact.
- **Invest in a strong team:** the attitude and skillset of a small team is key, especially in building external relationships.
- **Harness market forces:** build partnerships with providers to experiment with new approaches, such as housing associations.
- **Approach digital inclusion as an element of broader social inequality.**
- **Give the team air cover to experiment:** a strong team can try new approaches in collaboration with grassroots organisations, whether that's unlocking data vouchers for refugees or putting a 5G mast on a tower block.
- **Tackle the triangle:** digital inclusion teams address device, data and skills. All three are needed to create digital inclusion.

# Case study: 100% Digital Leeds

The [100% Digital Leeds](#)<sup>88</sup> programme is led by a team of six in Leeds City Council. They work with organisations across the city in different sectors to help more people get online, access digital skills and increase digital inclusion for everyone.

Originally grant-funded in 2018, they are now core funded as part of the Integrated Digital Service in the Council. “Digital” and digital inclusion is written into all of the departmental strategies across the city, such as economic recovery, health inequalities and beyond.

The role of the team is facilitative and amplifying; they identify gaps in provision and join up existing services and charities. They support local charities to register with the National Databank to distribute data, connect community centres, work on social housing pilots.

The team make a strong effort to understand the lived experience of people and communities to increase accessibility; people with sensory impairments, learning disabilities or older people, may have different needs and can’t be given the same devices.

The team recognise that most organisations they work with are not digitally-focused, such as food banks. **“A big part of our role is helping those organisations use digital to achieve their objectives.”** *Jason Tutin, 100% Digital Leeds Lead.*

**“A big part of our role is helping those organisations use digital to achieve their objectives.”** *Jason Tutin, 100% Digital Leeds Lead.*



## Part 3: Towards a Healthy Ecosystem for the Future

This section explores a systems-thinking approach to data poverty. This includes recommendations for how agents can collaborate, how we can take collective responsibility for digital inclusion and structural suggestions for policymakers and government bodies.

# Context

Internet access is a collective responsibility across a complex ecosystem. When the agents of the ecosystem are held in good tension, we can get closer to a world where *everyone has the internet access they need.*





## Context *(continued)*

**The UK has cultivated a regulated, competitive market**, which has driven down prices and enabled infrastructure development. Compared to other countries, the price of data and broadband in the UK is relatively cheap; the cost of a gigabyte of data is 59th cheapest out of 233 countries<sup>89</sup>. For the average cost of home broadband, the UK is 92nd cheapest out of 220 countries<sup>90</sup>. Private investment has enabled the development of strong fibre backhaul and mobile network infrastructure.

**UK internet provision serves many well.** Regulatory moves such as [Shared Access Licenses](#) have encouraged innovation and government initiatives have created conditions for full fibre and 5G networks to flourish, enabling businesses as well as individual access. Although BT/Openreach has a large monopoly, we currently have four Mobile Network Operators (where many countries have one or two) and growing challenger networks and ISPs.

**Too much regulation stifles goodwill and innovation.** In an industry where private companies deliver a public utility, regulatory and advisory bodies must walk the line of protecting citizen interest whilst stimulating a healthy market. This is a complex balancing act.

**The internet is facing a tipping point.** The digitisation of essential services – healthcare, benefits, tax, work, education – means access is becoming essential, as part of public service delivery.

**“That long list of things on the periodic table, if all those things aren’t available to you, you can’t function as a citizen. There’s got to be a minimal level of service.”**

*Simeon Yates, digital poverty expert*

**Increasing coverage is not enough.** We need to address the social reasons why some people are not able to get good quality internet access and take a collaborative, proactive approach. This builds on existing initiatives and collaborations and recommends ways the ecosystem can work together to tackle data poverty.

**Ideally, solutions to data poverty will utilise the strengths of a competitive market** whilst addressing people who currently can’t afford internet, don’t have the confidence to engage or who are geographically isolated.

# Recommendations for a healthy ecosystem

## 1

We must collaborate as agents in a wider ecosystem.

All elements of the ecosystem must work together, respecting the systems tension that holds provision together.

**“The market is acting like a market. That shouldn’t be a shock to anybody. It’s easy to paint industry as bad cop. It’s easy to paint government as bad cop, charities as good cop. But unless we understand the relationships and the problems of each and realise that maybe it’s just inertia and lack of collaboration - actually, that might be the bad cop - so if this was a blameless concept, let’s understand each other better.”** Chris Ashworth, digital poverty expert

### Recommendation:

Facilitate more spaces for industry, government, regulators, communities and people with lived experience to talk to each other. The Data Poverty All Party Parliamentary Group is a good example of this. The more we can learn from each other and develop solutions collaboratively, the better.

## 2

We need to make buying internet easier.

Buying water or electricity does not involve understanding megabits per second, navigating unfamiliar jargon or extensive, complex price comparisons. We need to empower citizens to make choices about buying internet in a way that protects the competitive advantages of a regulated market, whilst empowering citizens facing social disadvantage to purchase well. Regulatory guidance needs to shift so that internet is treated more like a utility.

### This could include:

- **a standardised guide for different use cases** (eg. a four person household with two gamers; a one person household), which broadband and mobile providers offer as guidance, empowering consumer choice. An imperfect guide is better than opacity.
- **widespread adoption of One Touch Switching<sup>91</sup>**, so that customers can switch to a new broadband provider without interacting with the “losing provider”. This should be available across all networks, not just ISPs contracted to the same network.

- **every conversation with a phone/broadband company including a mandatory check:** “There are some deals available only to those claiming benefits. Do you claim benefits? We will only use this information to identify whether you qualify for one of these packages”
- **internet providers mandated to offer the cheapest possible option**, when customers are making a choice. This precedent exists in other industries.
- **caps or restrictions on loyalty penalties.** In car and home insurance industries, the Financial Conduct Authority (FCA) have implemented mechanisms to all but abolish loyalty penalties<sup>92</sup>.



# Recommendations for a healthy ecosystem *(continued)*

## 3

### We must share the cost of socially driven internet access across the ecosystem

#### Recommendations:

- **Introduce Treasury-led funding mechanisms to share the cost of social tariffs with industry.** Proposals are being discussed which repurpose VAT or offer a levy on larger telcos. The best versions of these recognise broadband and mobile costs as a proportion of income, and so create a sliding scale of support.
- **The money has to come from somewhere.** If industry is asked to fund social tariffs in their totality, the cost will be likely passed on to other customers through price hikes in future years. Consumer price increases will not affect the population according to relative wealth; price hikes could impact low- to middle-income customers, placing increased stress on families who are not eligible for social tariffs but are still struggling. A government subsidy would distribute this burden more evenly.
- **Develop market incentives to be more hospitable to community-led challenger providers.** Challengers innovate, push quality standards and offer increased choice. To nurture a market which encourage them, the ecosystem could:
  - create further meaningful separation between large network and ISP operators such as BT and Openreach.
  - cap network and ISP charges to challengers.
  - reduce bureaucracy in voucher schemes and large scale procurement.
- **Continue support for mobile infrastructure expansion, holding the commitments of the [Shared Rural Network](#) to account.** This project, co-funded by Mobile Network Operators (MNOs) and Government aims to tackle not-spots (where there is no mobile coverage) and get 84% 4G coverage across the UK by 2025.
- **Increase provisions in licensing or mobile spectrum procurement which mandate socially-driven initiatives.** Radio spectrum is a limited, valuable and powerful national asset. The last large-scale spectrum license awards were in 2021 to support 5G rollout. In future, Government and regulators could consider increasing the social provisions of mobile spectrum procurement as a key mechanism to ensure both coverage and affordable access.

# Structural recommendations

To support a healthy ecosystem, I recommend structural considerations to policymakers on how data poverty is owned and tackled.

**Digitisation is a key strategy to increase efficiency and cut costs in public services** and has been for over 10 years<sup>93</sup>. It will only work if most of the population has reliable, private, regular access to the internet.

**“Digital First is the best way of improving outcomes and reducing costs, but people need to be able to access them. It should be a core task.”**

Darren Jones MP, Chair of the Data Poverty APPG

**“There’s loads of studies about the NHS and how it’s going to become more efficient and digitised that completely gloss over the fact that 50% of their major users have never touched a computer.”** *Helen Burrows, Policy Director, BT*

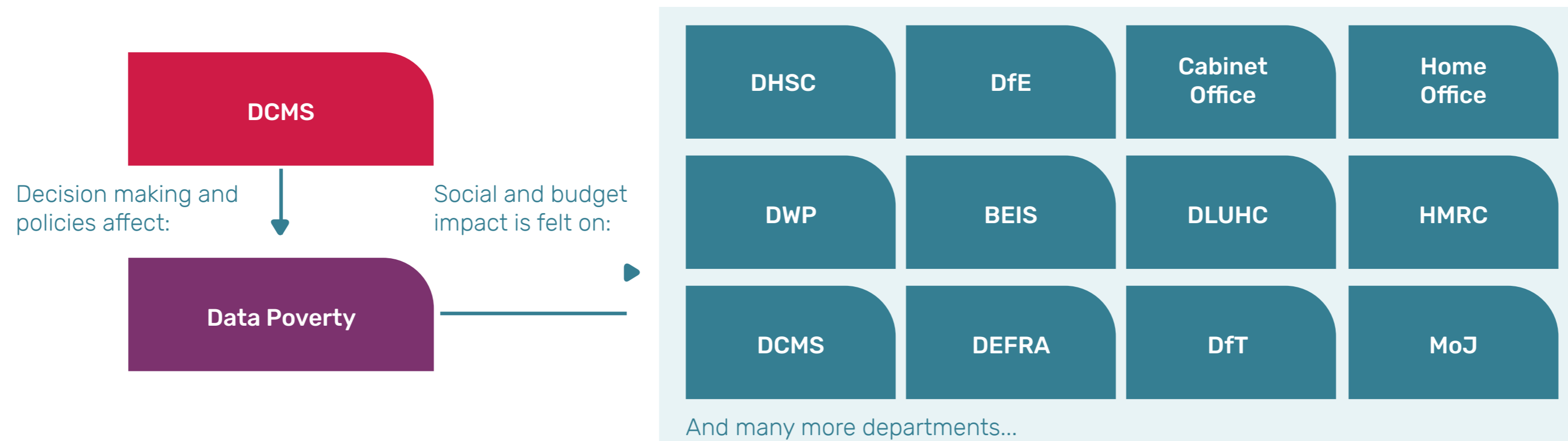
**Internet access will boost productivity and the economy.** Online access supports the start up of new businesses and hybrid working unlocks the potential of individuals from rural, coastal or disadvantaged communities.

A report commissioned by CityFibre on full fibre roll out estimates an additional £1.3bn in economic value through creating improved access to homeworking in 285 locations across the UK<sup>94</sup>. Openreach estimates fibre offers a £59bn boost to UK productivity by 2025<sup>95</sup>.

**Data poverty decision-making and responsibility is not held by the departments who feel the social and budgetary impact most.** Responsibility for data poverty is held in central government by the Department of Culture, Media and Sport ([DCMS](#))\*. The Government Digital Service ([GDS](#)) is in the Cabinet Office.

**But the impact of data poverty is felt by almost all government departments.** Lack of internet access prevents citizens speaking to their GP, registering for tax, seeking work, filling in immigrations and benefits forms, doing their homework, checking bus routes, managing energy bills, running home businesses and participating in civil society.

\*Building Digital UK (BDUK), an executive agency run out of DCMS, is responsible for rolling out broadband across the UK. BDUK runs Project Gigabit and the Shared Rural Network.





# Policy and government-focused recommendations

## Recommendations:

- **Build a unifying Digital Inclusion Strategy**, to complement the [UK Digital Strategy 2022](#). Digital inclusion needs to form part of all government departments, and be brought together through a unifying strategic vision, with clear, time-bound targets. The Welsh and Scottish Governments have strategies which focus on digital inclusion. The last UK Digital Inclusion Strategy is from 2014<sup>96</sup>.
- **Shift responsibility so that data poverty and digital inclusion are structurally aligned**. This could be a cross-departmental taskforce or a form of central department ownership, such as the Cabinet Office. The chosen mechanism is less relevant than the driving force to unify departments and local and national governments behind a common goal.
- **Adopt digital inclusion in leadership manifestos**. For future general elections, commitments to digital inclusion goals could form part of levelling up, environmental and industry targets. Metropolitan Mayors have already adopted digital inclusion as a key ambition, such as Mayor Andy Burnham in Greater Manchester<sup>97</sup>.
- **Research the effect of data poverty on GDS's commitments to digitise public services**. If we knew how much data poverty cost the public purse – for example in extra A&E attendances – there would be a more compelling argument for increased resource to tackle it. This would be useful both to Central Government, national governments and Local Authorities in developing monetary policy and spending decisions.
- **Build independent evidence on the productivity and economic impact of data poverty**. The impact of poor basic digital skills in the UK has been economically quantified<sup>98</sup>. To understand the relevance of data poverty to the Levelling Up agenda and the UK economy overall, we need to understand how poor internet speeds in Cornwall is stopping an 18-year-old trying to get a tech job at a start-up in Bristol, and the ripple effect this is having and will continue to have on UK economic growth. We must build on studies by network providers and develop further evidence.
- **Consider working with telcos to build community tariffs**. Currently there are two types of broadband available; home and business. There's growing evidence to suggest we need a broadband product which a community centre, sheltered accommodation or care home can afford, but which offers private access to citizens. Some telcos donate access, and councils offer public WiFi, but quality varies and privacy is held at a device or individual level. I recommend exploration to address this, especially in care homes and sheltered accommodation.



# Conclusion

Lack of good access to the internet is both a cause and a consequence of social inequality. In the UK, it affects access to essential services, our ability to express ourselves, how we connect with others and participation in society. The scalable solutions and ecosystem recommendations of this research offer a next step towards a future horizon, where data poverty is a thing of the past. The challenge is how we bring everyone with us into that inclusive digital future.





# Key Resources

## Key resources

This handy [guide](#)<sup>99</sup> from the Data Poverty Lab in partnership with [People Know How](#) outlines different ways to support people who are struggling to afford internet because of the cost of living.

The [Data Poverty All Party Parliamentary Group](#)<sup>100</sup> (APPG) is a key driving force for cross party working and collaboration with industry and the third sector.

100% Leeds have produced [Digital Inclusion Toolkit](#)<sup>101</sup>, to help evaluate digital inclusion programmes.

# About the Author

Kat Dixon builds partnerships to reimagine public services and access to healthcare. Whilst Director of Partnerships at national charity [Catch22](#), she has built digital skills and online safety programmes with global tech giants such as Microsoft, Google, Salesforce and TikTok. She is a [Digital Poverty Alliance Ambassador](#), advises on the [Digital Youth Index](#) and sits on the Advisory Group for the [Minimum Digital Living Standards](#). She speaks and writes on digital inclusion and equality, including the [2022 Digital Inclusion Policy and Research Conference](#), Connected Britain 2022 and the 2022 Labour Party Conference. This fellowship was awarded in Spring 2022 as one of three fellowships with the [Data Poverty Lab](#).

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