Digital Inclusion in Social Housing: Bridging the Technology Gap for Low-Income Households

Abstract

For low-income families living in government housing, not having access to technology is a big obstacle to getting involved in the economy and society. This paper looks at the nature, causes, and effects of digital exclusion among people who live in social housing. It focuses on how income poverty, housing inequality, and the fast growth of vital services into the digital world come together. This study uses information from recent policy evaluations and pilot programs, especially the Greater Manchester Digital Inclusion Pilot, to find three related parts of digital exclusion: access to infrastructure and devices, digital skills and literacy, and motivation and confidence to engage online. The results show that cost is still the biggest problem, along with poor infrastructure in older homes, lack of access to technology, and fundamental issues like housing instability. People who can't get online-only deals and services are hit with a "poverty premium," and digital exclusion makes the already existing gaps in work, education, health, and access to important services even worse. The paper looks at new policy and practice answers and shows how important it is to take a complete approach that focuses on the renter and combines connection, devices, skill development, and long-term support. It ends by suggesting a digital inclusion plan that is based on rights and focuses on housing. This plan sees digital access as a basic service and makes sure that digital inclusion is part of the main housing policy and practice.

Keywords: digital inclusion, social housing, digital exclusion, digital divide, housing inequality, digital poverty, affordable housing, digital skills

1. Introduction

To engage in public life, employment, education, and healthcare in the modern world, one must have access to affordable and reliable digital technology. Households in public housing with low incomes often find it harder to access the digital world. Many households don't have the right tools, knowledge, confidence, or internet access to use online services effectively (Housing Digital, 2024). A 2023 study carried out by Zahid Housing Consultancy survey found that a large number of Brits cannot get online. This is as a result of many issue which include things like; High data costs which in turn can cause many families to share or cancel internet services. Exclusion restricted rights, opportunities, and social engagement.

Residents of social housing may experience limited access to technology. These disparities stem from income-based destitution, unequal access to housing, and the rapid digitization of both public and private services. The Scottish Affordable accommodation Forum Network (2024) indicates that residents of social accommodation are statistically more likely to be elderly, experience illness, have chronic health conditions, or be employed in precarious positions. This exacerbates their existing challenges. The availability of welfare, housing, employment, and healthcare is on the rise; nevertheless,

those who do not possess the necessary technological skills are facing an intensified level of social and digital exclusion, as governmental initiatives progressively embrace a "digital by default" strategy (Greater Manchester Combined Authority, 2023).

This paper examines digital inclusion in social housing through five chapters. Following this introduction, Chapter 2 analyses the nature and drivers of digital exclusion among low-income tenants. Chapter 3 explores the consequences for households and communities. Chapter 4 reviews emerging policy and practice responses, with particular attention to evidence from recent pilot programmes. Chapter 5 proposes key directions and recommendations for designing and scaling effective, equitable interventions.

2. Nature and Drivers of Digital Exclusion in Social Housing

The research conducted by the UK government in 2024 examines the real concept of digital inclusion using three interconnected traits which include: having enough devices and infrastructure, being literate and skilled in digital matters, and possessing the motivation and self-assurance to participate online. For the most part, these aspects are interrelated. These dimensions are often linked together. With regard to occupants of social housing, deficiencies may be present across any one of these dimensions, and these deficiencies are further exacerbated by housing and financial limitations.

Table 1: Dimensions of Digital Exclusion: Challenges and Impacts

Dimension	Key Challenges	Example Impact
Access & Affordability	• High broadband costs vs. income • Poor infrastructure in old housing • Inability to get contracts in temporary homes	• Rationing internet use or disconnection • Missing out on online-only deals and services
Devices & Skills	• Device poverty (smartphone-only) • Low digital literacy and confidence • Fear of online scams and errors	• Inability to complete job/benefit applications • Children unable to do online schoolwork
Motivation & Confidence	• Lack of trust in online systems • Perceived irrelevance to daily life • No patient, accessible support available	• Increased social isolation and loneliness • Avoidance of essential digital services like banking

2.1 Access, Affordability, and Infrastructure

Digital inclusion's biggest hurdle is affordability. Some low-income renters in Greater Manchester are willing to pay £10 a month for fixed internet. Lowered "social tariffs" might not suit all families due to limited knowledge, tough requirements, and insufficient data. Rising housing and utility costs are pushing some households to give up internet or switch to pay-as-you-go mobile data.

Infrastructure and housing design also play significant roles in digital exclusion. Older blocks, rural schemes, and high-rise buildings may lack modern wiring or suffer from structural features,such as thick concrete walls, asbestos, or fire-safety constraints,that make installation difficult or costly (Cambridge Land Economy, 2024). Multi-dwelling units can face coordination and way leave challenges between landlords and providers. In some developments, exclusive arrangements with a single internet provider limit competition and constrain affordable choices. Residents in temporary accommodation may be unable to secure a line at all because they cannot enter long-term contracts (Pew Research, 2022).

2.2 Devices, Skills, and Confidence

Meaningful usage is limited by poor digital literacy and device poverty, even in areas with connection. Complex activities like job applications, welfare claims, homework, or document uploads are challenging for many social housing occupants who depend entirely on smartphones, sometimes with restricted data plans (University of Liverpool, 2023). Compared to the general population, low-income renters are less likely to own laptops or tablets, and some families own none at all.

Skills and confidence gaps are particularly pronounced among older adults, people with disabilities, and those with limited formal education or low literacy. The apprehension surrounding potential errors, fraudulent schemes, or financial loss in the digital realm prompts numerous individuals to steer clear of endeavors they consider perilous,such as online banking, benefits management, or official documentation,even while they engage with social media or messaging platforms (Greater Manchester Combined Authority, 2023). In the absence of readily available, patient assistance, self-directed online tutorials often fall short for individuals beginning with a limited skill set.

2.3 Housing Precarity and Structural Factors

The housing situation creates structural barriers to digital inclusion. Residents in emergency, subsidized, or temporary housing sometimes struggle to establish permanent contracts or invest in necessary equipment due to the uncertain or short duration of their stays (Connecting Cambridgeshire, 2024). Studying, working, or engaging in discreet online activity becomes very challenging, if not impossible, due to the absence of

personal space, even with an internet connection. This is particularly true in low-income families and houses with several occupations.

Social housing estates can also experience cumulative disadvantage: geographic clustering of low-income households with poor local infrastructure, fewer community resources, and weaker digital ecosystems,such as fewer local training centres, libraries, or support organisations (Scottish Affordable Housing Forum Network, 2024). All of these factors interact with income poverty to create entrenched patterns of digital exclusion.

3. Consequences for Low-Income Households and Communities

In a situation where someone has been cut off from technology in social housing it tends to have a huge number of different effects on people's lives. It makes current gaps worse and creates new kinds of poverty.

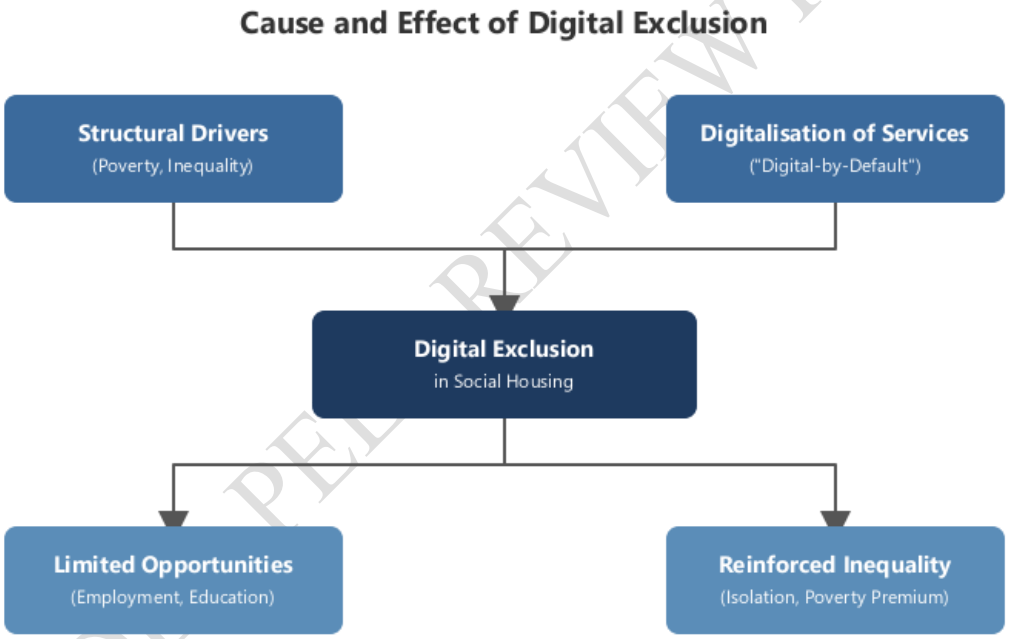

Figure 1: Cause and Effect of Digital Exclusion

3.1 Employment, Education, and Income

Connectivity to the internet is becoming more important for those seeking employment or working remotely. People in a comparable situation who are online are much less likely to be jobless or not working for pay, according to Health Innovation East (2024). It is far more difficult for renters to do job searches, send resumes, and complete online training and licensing without access to dependable internet and the appropriate gadgets. Because most kids undertake their everyday activities, homework, and utilize educational materials online, being unable to access these things can hurt their grades. Obviously,

children and teenagers who rely on shared devices or phones to access the internet are in a worse position.

These problems make it harder to make money and less likely to be able to handle economic changes. On the other hand, people who didn't have access to training and jobs before are now more likely to look for work, take part in training, and get better job results (JMIR Formative Research, 2024).

3.2 Access to Services and Rights

Digital exclusion hinders key services as governments and service providers move digital-by-default. Online access and digital literacy are required for many welfare applications, housing registries, repair reporting systems, and health services including appointment scheduling, repeat prescriptions, and telemedicine (The King's Fund, 2024). Intermediaries, public access points, and telephone services may be restricted, causing delays, missing entitlements, or disengagement for tenants without such access.

Those who cannot log on frequently or traverse sophisticated systems may struggle to get or upgrade homes using online bidding and property search procedures. Lack of internet access perpetuates housing inequality (Cambridge Land Economy, 2024).

3.3 Health, Wellbeing, and Social Connection

Research shows that older people who don't use technology tend to face more health problems. If you don't have internet access or tech skills, finding reliable health information can be tough. It can also be hard to use digital tools for managing ongoing health issues or to take advantage of telehealth services, which are becoming more common in both primary and specialty care. People who can't use video chats, social networks, or online interest groups often feel more isolated, especially if they have trouble getting around (Seifert et al., 2021).

Being left out of the digital world can create stress and feelings of shame for families with limited income. Parents might feel upset if their kids struggle with homework or joining online school activities, and adults can feel down about not having the skills to keep up with a society that expects everyone to be good with technology (Yates et al., 2020). These psychological effects can lead to a decrease in confidence and make it harder for people to reach out for help.

3.4 Financial Exclusion and the Poverty Premium

Offline or low-tech households spend more money on products and services because they can't shop around, switch providers, or take advantage of deals that are only available

online. According to Digital Inclusion (2024), the "poverty premium" affects utility, insurance, transportation, and consumer products. Online banking and budgeting options may be restricted, compelling consumers to resort to more expensive methods for financial management and credit. Consequently, digital exclusion exacerbates economic inequality (Resolve Poverty, 2024).

4. Policy and Practice Responses: Bridging the Gap

Recent efforts show that tackling digital exclusion in social housing needs a team approach. This means bringing together better infrastructure, affordable options, skills training, and ongoing support.

Table 2: Comparing Digital Inclusion Intervention Approaches

Intervention Approach	Core Components	Key to Success
Infrastructure Focus	• Social broadband tariffs • Free data SIMs • Retrofitting buildings for better connectivity	• Zero-cost or very low-cost offers • Simple eligibility and sign-up processes
Skills & Support Focus	• Peer "Digital Champion" programs • One-to-one or small group training • Support from trusted community figures	• Patient, tailored, relationship-based help • Focus on practical, everyday tasks
Integrated & Holistic	• Combines connectivity, devices, skills, and support into one program • Digital support embedded in housing services	• Co-designing solutions with tenants • Addressing multiple barriers at once
Targeted Support	• Age- or disability-specific tools • Employment-focused digital skills for youth • Assistive technologies for disabled residents	• Delivered by trusted intermediaries • Programs are relevant to the group's specific goals

4.1 Infrastructure and Affordability Measures

At a policy level, some governments and regulators have begun to treat broadband as essential infrastructure and promote social tariffs or subsidies for low-income households. In the UK, guidance encourages providers to offer discounted packages to benefit recipients, whilst broader digital inclusion strategies highlight social housing as a priority delivery channel (UK Government, 2024).

But, what we've learned from the Greater Manchester Digital Inclusion Pilot shows that just having access isn't enough. Only about one in ten social housing residents took

advantage of the discounted connectivity, mainly due to issues like affordability, a low perceived value, and other financial pressures (Greater Manchester Combined Authority, 2023). When offers were free or very low cost, like data SIMs for care leavers, more people took advantage of them and reported greater benefits. This shows how important price, clarity, and flexibility are.

Standardised wayleave agreements and proactive partnerships between housing providers and internet service providers (ISPs) have shown promise in reducing deployment barriers and encouraging investment in social housing stock. Planning requirements for broadband-ready new builds and support for retrofitting older blocks can further close infrastructure gaps (Pew Research, 2022).

4.2 Skills, Support, and Tenant-Centred Models

Digital skills and confidence cannot be assumed to follow automatically from connectivity. Many reviews highlight the importance of having local, relationship-driven support systems,such as community centers, housing offices, and peer "digital champions",to assist tenants in building and sustaining their digital skills (Sheffield Hallam University, 2013). Receiving personalized assistance, whether through one-on-one sessions or small group interactions, for everyday tasks such as navigating email, managing benefits accounts, accessing health services, or communicating with landlords tends to be much more impactful than relying on generic online courses.

Successful initiatives share several design principles:

- Layered interventions that address devices, connectivity, skills, and ongoing help together, rather than focusing on a single element (Yates et al., 2020).
- Co-design with tenants, ensuring that offers and training respond to real needs and constraints, including language, literacy, disability, and caring responsibilities (University of Liverpool, 2023).
- Integration with housing services, so that digital inclusion is embedded in routine contact,such as repair reporting and tenancy support,rather than treated as a stand-alone project (Platform Housing Group, 2024).
- Attention to online safety and trust, including guidance on scams, privacy, and misinformation, which is especially important for older adults and those with previous negative experiences (Greater Manchester Combined Authority, 2023).

4.3 Targeted Approaches for Vulnerable Groups

Various communities within social housing have unique needs for assistance. Numerous older adults flourish when the learning process allows for a little extra time and unfolds at a pace that feels just right for them. They value devices that are user-friendly, featuring

simple interfaces, and see immense benefit in weaving digital tools into their health and social care routines. Individuals with disabilities can find great value in assistive technologies, carefully crafted design features, and the reassurance that smart home systems can empower their independence rather than limit it. Care leavers and young tenants may respond best to employment-focused digital skills, portable connectivity solutions, and peer mentoring (Policy Connect, 2024).

Programmes that explicitly target these groups and are delivered through trusted intermediaries,such as supported housing staff, community organisations, and youth workers,have reported positive outcomes in confidence, service access, and in some cases, employment and education progression (Seifert et al., 2021).

4.4 Governance, Partnerships, and Sustainability

Housing providers, local authorities, internet service providers, and civil society organizations each contribute a vital piece to the overarching solution. Collaborative partnerships involving multiple stakeholders have the potential to harmonize resources, expertise, and responsibilities. However, they necessitate well-defined governance structures, common objectives, and a sustained commitment over time. Short-term pilots showcase their effectiveness; however, they frequently encounter challenges in maintaining provision once the initial funding concludes (Digital Promise, 2024).

Embedding digital inclusion in core housing strategies and regulatory frameworks,treating it as an element of housing quality rather than an optional extra,can support a shift from projects to long-term programmes. Similarly, integrating digital equity goals into broader public health, education, and anti-poverty strategies can ensure that resources and accountability are shared across sectors (Council of Large Public Housing Authorities, 2024).

5. Discussion and Conclusions: Towards a Rights-Based, Housing-Led Digital Inclusion Agenda

Digital exclusion in social housing is not an incidental or marginal issue; it is a structural feature of contemporary inequality that intersects with income, health, age, disability, and housing conditions. As societies digitalise further, the cost of exclusion will rise, particularly for those already experiencing disadvantage.

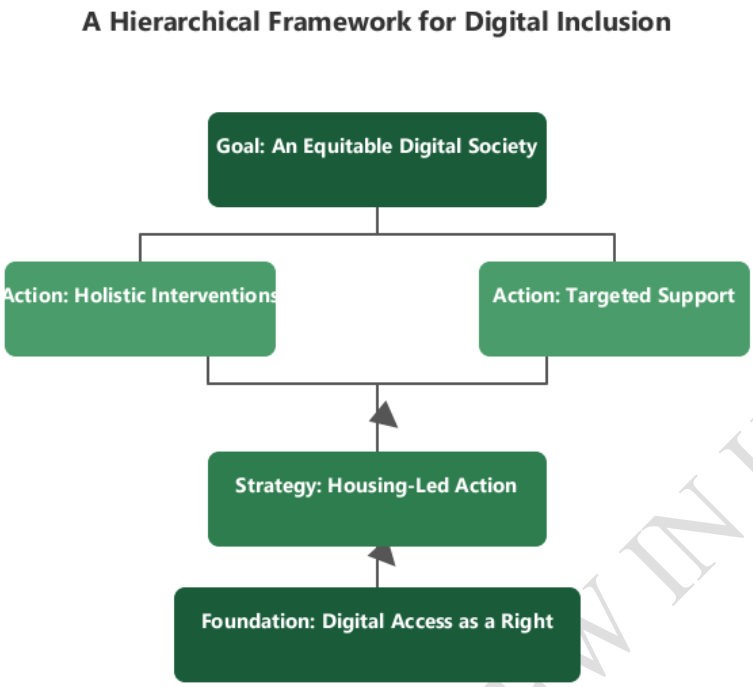

Figure 2: A Hierarchical Framework for Digital Inclusion

The evidence reviewed in this paper suggests several key directions for bridging the technology gap for low-income households in social housing:

- Reframing digital access as a basic utility and social right, on a par with safe, warm, secure housing. This implies regulatory and funding frameworks that guarantee affordable, reliable connectivity and suitable devices for low-income tenants (UK Government, 2024).
- Embedding digital inclusion in housing policy and practice, including minimum connectivity standards for social housing stock, routine assessment of tenants' digital needs, and integration of digital support into everyday housing management (Housing Digital, 2024).
- Designing holistic, tenant-centred interventions that combine infrastructure, affordability, devices, skills, and ongoing support, guided by co-production with residents and attention to equity across groups (Scottish Affordable Housing Forum Network, 2024).
- Developing sustainable delivery models, with multi-year funding, formalised partnerships between housing providers and ISPs, and workforce development for digital support roles in the housing sector (JAR Solutions, 2024).
- Addressing risks of surveillance and data misuse in digitally enabled housing, ensuring that technologies enhance, rather than erode, autonomy, privacy, and trust (Prism Sustainability Directory, 2024).

Future studies should look more closely at the long-term effects of digital inclusion programs in social housing. This includes looking at how these programs affect people's job prospects, health and well-being, and the security of their housing. Looking at the pros and cons of different models, like general vs. tailored, peer-led vs. professional, and digital vs. face-to-face, can help us find more cost-effective and context-sensitive ways to work. As housing companies use more digital tools, it will be important to look at how people use smart home technologies and data control (Policy Connect, 2024).

Ultimately, bridging the technology gap in social housing is both technically feasible and socially imperative. A rights-based, housing-led digital inclusion agenda, underpinned by sustained public investment and genuine partnership with tenants, offers a path toward greater equity in a digital society.

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