A neighbourhood approach to digital inclusion of older people: trialling Behavioural Systems Mapping in five communities

Findings Report

About the research

A neighbourhood approach to digital inclusion of older people: trialling Behavioural Systems Mapping in five communities was a project undertaken to explore how Behavioural Systems Mapping (BSM) can help councils and community partners design more effective, place-based strategies to improve digital inclusion for older people (aged 60+).

Older adults remain one of the UK's most digitally excluded groups, facing barriers such as low confidence, limited skills, accessibility challenges and lack of trust in technology. The project aimed to understand how BSM can be used to help teams create strategies and interventions that are better designed to overcome the systemic barriers to digital inclusion that older people in the UK currently face.

The funding and partnership

This project was funded by the Department for Science, Innovation and Technology Digital Inclusion Innovation Fund.

The partnership consisted of DG Cities, the Royal Borough of Greenwich, Haringey Council, Ealing Council, Leicester City Council, and North East Lincolnshire Council, with expert support from Dr Elise Crayton, Dr Lucy Porter, Dr Vivi Antonopoulou, Dr Ayse Allison on behalf of the Centre for Behaviour Change University College London.

About the authors

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Acknowledgements

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This report was shaped by the contributions from the BSM process and with inputs from across the partnership. The discussions and reflections shared by partners and participants were invaluable in improving our understanding of not just digital inclusion but of the BSM methodology itself.

Recommended citation

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About this report

This report presents the full findings from **A neighbourhood approach to digital inclusion of older people: trialling Behavioural Systems Mapping in five communities**. It provides a comprehensive account of the project, including the research methodology, neighbourhood-level insights for each of the five participating local authorities, cross-neighbourhood findings on digital inclusion, methodological reflections on the applied method of BSM, and recommendations for policy and practice. It is accompanied by the following complementary resources designed for different audiences and purposes:

- **Executive Summary**: A concise overview of the project, key findings and recommendations for readers seeking a high-level summary.
- **Project Website and Behavioural Systems Maps**: An online resource displaying project outputs and supporting materials, including the individual Behavioural Systems Maps and geospatial maps developed for each partner neighbourhood.
- **Annex**: Supplementary information on the research methodology, analysis and data synthesis undertaken during the project, designed to provide additional transparency for the findings presented in this report.
- **BSM Guide**: A practical guide based on lessons from delivering this project, aimed at public and third-sector practitioners interested in applying Behavioural Systems Mapping in their own local contexts; it focuses on methodological background, practical considerations, implementation insights and how-to-guidance.

Introduction

The 'Digitally left behind' generation

Older people remain one of the most digitally excluded groups in the UK, facing barriers of skills, confidence, accessibility, and trust. While overall internet adoption has grown, recent analysis reveals that approximately 1 in 6 people aged 65 and over (equivalent to 2.3 million people) do not use the internet, a figure that rises to nearly 30% for those aged 75 and over.[1] Furthermore, basic access does not guarantee capability; over one in three people aged 60 and over (4.7 million) lack the fundamental digital skills required to navigate the internet safely as part of day-to-day life[2], and one in three people over 60 (5.1 million people) say their lives have become harder in the last five years due to the growing number of services moving online.[3]

Digital exclusion is also linked to individual and community issues.[1] Those who are digitally excluded are more likely to experience poor health, disability, or low income - which further compounds digital exclusion. The consequences of digital exclusion can be significant - reduced access to healthcare, welfare and financial services, and lower labour market participation. Exclusion increases financial vulnerability, and acts as a direct catalyst of risk of poor health, and increased risk of isolation and loneliness.[6]

Digital inclusion is now being recognised as a health issue, with its link to population health well evidenced. The recent NHS England Inclusive Digital Healthcare Framework recognises digital exclusion as a factor that compounds health inequalities, acting as a systemic barrier at every stage of the patient journey: from preventing patients from navigating digital health services, to accessing services or resources that can support healthy living. Furthermore, the NHS 10-Year Plan's transition to a Neighbourhood Health model relies heavily on a shift from analogue in-person delivery to digital services, positioning tools like the NHS App as the foundation of community-based care. The Neighbourhood Health model brings together the three core pillars of the NHS 10-Year Plan – the shift from analogue to digital, from hospital to community, and from treatment to prevention – meaning that its successful delivery depends on digital services as a key enabler of community-based and preventative care. [4] Therefore, making significant progress on digital inclusion towards enabling equitable digital healthcare is a priority area for the wider healthcare system.[5]

Slow progress on a growing problem

Progress towards reduced digital exclusion is not equally distributed - and for many is not happening fast enough. The rate of change for those over 65 is particularly nuanced. The Government's Digital Inclusion Action Plan illustrates a complex duality of a 'narrowing' digital divide, in which the number of absolute non-users is reducing, whilst at the same time there is a concurrent 'deepening' of impacts which are increasingly severe for excluded people. Coupled with continued cost-of-living pressures, 'data poverty' is highlighted as a major pressure putting vulnerable people, including those aged 60+ at greatest risk.[6]

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[1] Age UK (2024). *Offline and Overlooked: More than 1 in 3 over 65s (4.7 million) lack the basic skills to use the internet successfully.*

[2] ibid

[3] Age UK (2025). *Bridging the Digital Divide: Ensuring No One is Left Behind.*

[4] NHS England (2025) *Fit for the future: 10-year health plan for England.*

[5] NHS England. (2023). *Inclusive digital healthcare: a framework for NHS action on digital inclusion*.

[6] Department for Science, Innovation and Technology (2025) *Digital Inclusion Action Plan: First Steps.*

To overcome this challenge, the Government's Digital Inclusion Action Plan: First Steps calls for moving from treating digital exclusion as a single issue to be 'solved', and instead a cross-cutting challenge requiring continuous effort.[7] To do so will require coordination, collaboration, and deep sustained work to tackle embedded barriers that are limiting progress for at-risk groups.

A systems approach to digital exclusion

Recent thinking has moved from viewing digital exclusion as a technical challenge (e.g. of limited hardware, poor internet connection) or purely social challenge (e.g. poverty) to instead a socio-technical issue - recognising that the individual and community social context and the technologies, tools, and systems they use, are deeply intertwined and interact with one another. Viewed through this lens, individual capability, opportunity, and motivation factors are understood within the context of higher-level and collective structures and factors. A system-lens is therefore required.

Recent critical studies have highlighted the need for strategies and interventions that are designed to bring about meaningful change through recognition of the limitations of public budgets, the multi-faceted and interlinked nature of the factors that impact decision makers, and the very real challenge of inefficient and ineffective policies and interventions.[8] Key to this is better understanding of the local system in which digital exclusion exists, as a factor that may be reduced or exacerbated unintentionally by the actions of institutions and organisations.

Picking up on this challenge, The House of Lords Communications and Digital Committee called for a pragmatic, proportionate, and joined up approach, which recognises the inherently cross-cutting nature of the challenge, and the interrelated actions of stakeholders:

"Some responsibilities (to tackle digital exclusion) are reserved to the UK Government, for example broadband policy, though many practical delivery mechanisms are delegated to local authorities and Devolved Administrations. Ofcom oversees regulatory enforcement. Local authorities ensure strategies and services meet local needs. Community organisations, charities and businesses often provide the expertise, local knowledge, time and resources to translate policy objectives into action on the ground." House of Lords Communications and Digital Committee.[9]

Taken together, evidence suggests that the digital exclusion of older people is not merely an individual access or skills issue, but rather a systemic problem shaped by the interaction of national policy, local delivery, and community capacity. Addressing it therefore requires place-based approaches that recognise how these wider systems operate in practice, particularly at the neighbourhood level at which people access services and support day-to-day.

[7] ibid

[8] Centre for Social Justice (2023) How to tackle digital exclusion and reduce the poverty premium

[9] House of Lords Communications and Digital Committee. (2023). *Digital exclusion* (HL Paper 219).

Thinking neighbourhoods

Research by the Centre for Social Justice (2023) and Independent Commission on Neighbourhoods (2025) shows considerable variation in digital inclusion support across communities. Pressures on local authority budgets and third sector resources mean that long-term investment in digital inclusion interventions are limited and scattered.[10]

Making positive change against digital exclusion requires approaches that recognise the systemic nature of the challenge, and which take account of the importance of ensuring resources, expertise and action are enabled at a level at which long-term outcomes are more likely to be sustained. As the Independent Commission on Neighbourhoods (ICON) notes this balance between centre and local can be achieved by 'thinking neighbourhoods'.[11]

The UK policy landscape is undergoing a fundamental shift from policy designed around centralised and one-size fits all services towards place-based and neighbourhood and hyperlocal thinking. Across public health the transition towards neighbourhood thinking is designed to devolve decision making and resources closer to where outcomes are realised, and to integrate services around specific socio-economic and demographic groups, better reflecting local communities. This move, away from fragmented operations, is designed to foster collaboration and build shared local responsibility for services and outcomes.

The benefits of shifting to place-based and hyperlocal approaches are considered numerous and include pooled and targeted budgets and resources, removal of institutional silos, alignment towards joined outcomes, and importantly a stronger focus on preventative outcomes for local communities. For people receiving support, these approaches can also enable more accessible and responsive interventions that are better tailored to local needs and opportunities.[12]

The health service too is undertaking a sizable shift in orientation towards neighbourhood service provision. The publication of the government's NHS 10 Year Plan cemented the intention to move towards a 'neighbourhood health service', based around proactive service provision via Neighbourhood Health Centres of co-located health, social services and third sector partners to treat patients locally and address the wider determinants of health.

Hyperlocal digital inclusion

A driver of the adoption of place-based approaches is the need to tackle the wider, social determinants of health - which include poor-quality housing, social isolation, insecure employment, and digital exclusion. These factors often disproportionately impact marginalised communities, leading to worse outcomes.

Recent work by the Independent Commission on Neighbourhoods[13] highlights that to make a much-needed impact on digital exclusion, there is a real need for joined-up work across complex systems of actors that shape the lives of those that are most disadvantaged by digital exclusion and take account of these wider factors. This includes multiple public services, the third sector, and the private sector. All are required to draw on their expertise and knowledge to bring about change through policies and services which directly

[10] Digital Inclusion APPG (2024) *Third State of the Nation Report.*

[11] Independent Commission on Neighbourhoods (2025) *Hyperlocal Digital Inclusion.*

[12] Local Government Association (2021) *Trusting place: Improving the lives of local people through place-based approaches.*

[13] Independent Commission on Neighbourhoods (2025) *Hyperlocal Digital Inclusion.*

interact with people. Additionally, central and local government teams play an important anchor role in establishing and maintaining the conditions for service delivery, and co-ordinating the resources that are needed to reduce barriers to digital inclusion.

Shifting from a generic digital inclusion approach to a targeted neighbourhood-level strategy may have several key benefits to helping to tackle digital exclusion for those aged 60+. Research highlights that digital exclusion rarely exists in isolation, and is instead linked to compounding disadvantages including poverty, social isolation and poor health. For those aged 60 and over these barriers can be further exacerbated by interlinking factors: for example, a person on low income may also have limited mobility and lack nearby family support, making it harder to develop digital skills or seek help when using online services. The impact of these combined disadvantages is often more severe for health outcomes over the longer-term.

Taking a place-based perspective also supports consideration of the unique contextual factors that shape digital exclusion: encouraging consideration of the specific factors that make a neighbourhood unique. Doing so also has the potential to support community engagement, co-design and co-ownership of policies and interventions - potentially building buy-in and leveraging unique local resources to tailor policies and interventions to local needs. As ICON highlights, *"Hyperlocal digital inclusion embeds digital support in the places people already know and trust, enabling support workers and volunteers to recognise the intrinsic motivations and abilities of the person they are working with and to present them with the opportunities that digital tools can offer them."*[14]

[14] Independent Commission on Neighbourhoods (2025) *Hyperlocal Digital Inclusion.*

Behavioural Systems Mapping: a potential method for helping systemic thinking on digital inclusion?

Purpose of this research

Approaches that focus on single barriers or isolated interventions are unlikely to generate sustained change given the complex and interconnected nature of digital exclusion. Digital inclusion is shaped by the interaction of multiple actors, institutions, and services operating across different levels of the system – from national policy and infrastructure to local service provision and community support. For older adults in particular, barriers such as confidence, health, accessibility, cost, and service design often overlap and reinforce one another. Addressing digital exclusion therefore requires methods that can capture these interdependencies and help stakeholders identify coordinated points of intervention.

To support a more systemic understanding of digital exclusion at neighbourhood level, this project thus adopted Behavioural Systems Mapping (BSM) as a core methodological approach[15]. BSM is a structured method for visually mapping the actors, behaviours, and contextual factors that shape a complex issue; producing a visual 'map' that details who is involved in digital inclusion at a local level, what actions they currently take, and the barriers and enablers that influence those actions. By making these relationships explicit, BSM may help stakeholders collectively explore where meaningful change may be possible. Further detail on the practical application of BSM is provided in the accompanying guide developed for this project.

Exploring behaviour through a systems lens

BSM was trialled, drawing on its three complementary methodological components: behavioural science, systems thinking, and participatory approaches. Together, these concepts may enable a more holistic understanding of digital inclusion and support the design of interventions that reflect the realities of local neighbourhood systems.

First, behavioural science provides the analytical framework for identifying the behaviours that underpin digital inclusion outcomes and subsequently diagnosing their underlying barriers and enablers; allowing for the design of more effective interventions. This focus on behaviour is important because digital inclusion outcomes do not simply result from infrastructure or policy decisions alone; they emerge through the everyday actions taken by actors within the system (e.g. an older resident using an online health service or a community organisation signposting residents to digital training opportunities). Behaviours influence whether or not digital inclusion happens in practice, and mapping them can therefore help identify who needs to do what differently for key digital inclusion outcomes to improve. Importantly, this approach moves beyond traditional 'human deficit' perspectives that place responsibility solely on individuals and recognises that behaviour is shaped by the opportunities, resources, and constraints created by the surrounding environment – the system.

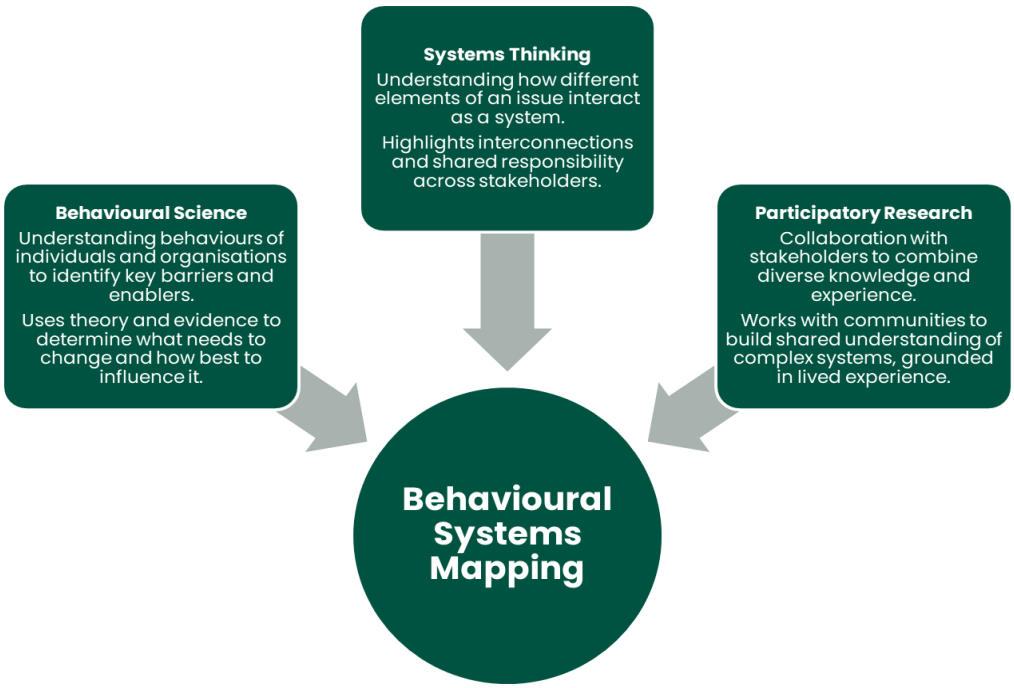
[15] BSM has been applied in environmental policy and housing retrofit contexts to understand the systems shaping energy efficiency and retrofit uptake, including work by the UCL Centre for Behaviour Change (e.g. Hale et al. 2022, Davan Wetton et al. 2025).

A key model used within this behavioural approach was the Capability, Opportunity and Motivation model of Behaviour (COM-B), developed as part of the Behaviour Change Wheel (BCW)[16]. COM-B proposes that behaviour occurs through the interaction of three conditions: whether individuals, groups or organisations have the capability to act, the opportunity to do so, and sufficient motivation. Within this study, COM-B provided a structured way to organise and interpret the barriers and enablers affecting key behaviours identified during the mapping process. This helped ensure that participants considered a broad range of influences such as skills, service design, institutional routines, social support, and access to resources[17].

Second, systems thinking as outlined above provides a way of understanding how the wider ecosystem of actors and institutions shapes behaviour. Digital exclusion is not the responsibility of any single organisation or group; rather, it emerges from interactions across a network of stakeholders including local authorities, health services, community organisations, charities, and residents themselves. Systems thinking helps reveal these interdependencies and highlights how actions in one part of the system can enable or constrain progress elsewhere. This perspective aligns closely with hyperlocal and neighbourhood policy making, where coordinated action across multiple actors is required to address cross-cutting challenges such as digital exclusion.

Third, the mapping process uses participatory methods, bringing together local stakeholders to collaboratively build and refine the systems map. This approach shifts the process from analysing a community from the outside looking in toward working with stakeholders who have first or second-hand experience of the issue. Local practitioners, community organisations, and other stakeholders contribute their knowledge of the local context, helping to identify where barriers lie and where opportunities for change may exist. Involving stakeholders in this way may also help build shared ownership of the findings and increase confidence in the relevance and feasibility of proposed interventions.

Figure 1: Behavioural Systems Mapping



[16] Michie, S., Van Stralen, M. M., & West, R. (2011). The behaviour change wheel: a new method for characterising and designing behaviour change interventions. *Implementation Science*, 6(1), 42.
Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions.* Silverback Publishing.

[17] For a more detailed explanation of the COM-B model and its application within this project, see the Methodology section of this report (Pg xx). Practical guidance on using COM-B and BSM in applied settings is also available in the accompanying BSM guide.

By combining these three methods, BSM enables stakeholders to jointly examine how behaviours, institutions, and local contexts interact to shape digital exclusion. The resulting systems map can then be used as a practical tool to support decision-making. For example, it can help identify and prioritise potential interventions, explore different strategic approaches, support integration across policies and services, and facilitate connection and communication between stakeholders. In doing so, BSM provides a structured way to translate complex systems into coordinated action aligned with neighbourhood digital inclusion priorities.

This approach builds on a growing body of applied behavioural systems work in local government contexts[18] as well as more recent international applications in hyperlocal community settings[19]. These examples suggest BSM may offer a transferable approach for understanding complex neighbourhood issues.

[18] Davan Wetton, J., & Ustaoğlu Allison, A. L. (2025). *Causes of litter and flytipping: A behavioural systems mapping project using the System Effects Method (Report).* Zero Waste Scotland. https://www.zerowastescotland.org.uk/resources/causes-litter-and-flytipping-behavioural-systems-mapping-project

[19] Baker, V., Walton, M., Manning, S., Ataria, J., Gee, C., & Taua-Gordon, R. (2024). *System effects mapping: A tool for promoting collaborative community ecological action*. *Frontiers in Environmental Science, 12,* 1356065.

Box 1: Important information about the method

This trial explored BSM as an approach to understanding neighbourhood-level digital exclusion for older people aged 65+.

As the trial progressed several key alterations were made in recognition of the opportunities and limitations highlighted by partners - including:

(1) Resident engagement was initially out of scope due to resource and timing limitations. However, this was included where possible given recognition of its importance to partners

(2) Spatial analysis was undertaken in recognition of the neighbourhood lens, and potential value to stakeholders and to understanding the value of BSM in this context.

The use of these complementing methods has also enabled the trial to make recommendations on how and where they can be effective.

Throughout the report we explore BSM as the key method, and detail the benefits and challenges in supporting BSM with the above methods.

Methodology

Overview

BSM was tested as a participatory approach with key stakeholders to explore neighbourhood-level digital inclusion for people aged 60+. The approach was designed to draw on the knowledge and experience of key local actors working within neighbourhoods to collaborate and share their understanding. In doing this BSM recognised the resource constraints of local authorities and partners, and looked to maximise participation and learning for a small local cohort to support potential future utilisation of the methods trialled.

Within the BSM process, two behavioural science frameworks were used to support analysis and intervention development. First, the COM-B model was used as a diagnostic tool to help participants identify and structure key influences on key behaviours. COM-B forms part of the wider Behaviour Change Wheel (BCW)[20] and was used here to encourage participants to consider a broad range of factors relating to capability, opportunity and motivation rather than focusing solely on individual skills or awareness. Second, the APEASE framework[21] (Affordability, Practicability, Effectiveness, Acceptability, Side-effects and Equity) was used at the intervention development stage to support prioritisation of potential actions. APEASE is a decision-making framework commonly used in behavioural science to assess the suitability of intervention options. In this project, APEASE was used to support structured review of which interventions were not only potentially impactful given the results of the BSM process, but also realistic and equitable within the local neighbourhood contexts.

Together, these models provided a structured way to move from understanding behavioural influences to considering which interventions may be feasible and appropriate in local neighbourhood contexts.

In addition to BSM, we also worked with partners to complement the approach with two additional methods; spatial analysis and community engagement, which provided additional data and insights to understand digital exclusion at the neighbourhood level. Triangulation and synthesis of data from across the three data methods enables this research to explore the benefits and challenges of BSM, and the potential benefits of BSM in combination with these methods.

[20] The broader Behaviour Change Wheel, within which COM-B is situated, was used conceptually to inform the overall logic of the process; however, the full BCW intervention design stages were not applied directly in any of the workshops. This reflected the participatory nature of the project, where intervention ideas were generated collaboratively by stakeholders through co-design rather than being selected through a formal behavioural intervention design process.

[21] Michie, S., Atkins, L., & West, R. (2014). *The behaviour change wheel: A guide to designing interventions*. Silverback Publishing.

Figure 2: Triangulation of data to support understanding of neighbourhood level digital exclusion of people aged 60+

Participatory Behavioural Systems Mapping Workshop Series

Workshop Structure

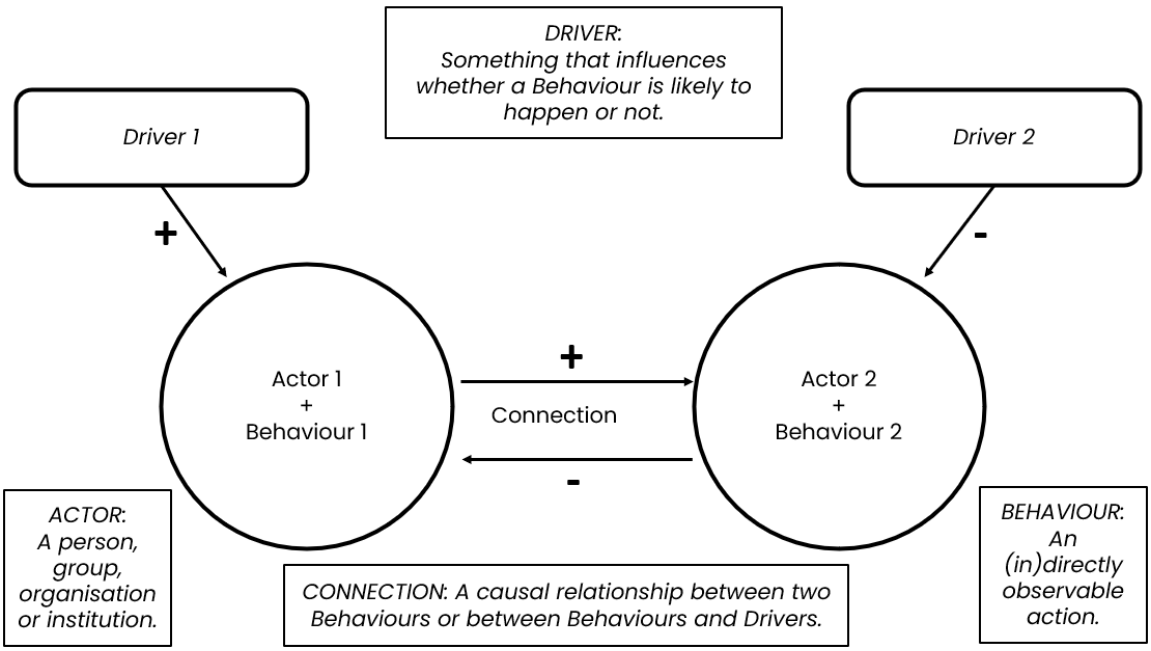
Four workshops were conducted in each of the five neighbourhoods: Horn Park (Royal Borough of Greenwich), Havelock Estate (Ealing Council), Noel Park and West Green (Haringey Council), Eyres Monsell and Gilmorton Estates (Leicester City Council), and Waltham (North East Lincolnshire Council). In total 20 workshops were undertaken across the trial neighbourhoods. The workshop series in each neighbourhood was structured as follows:

Table 1: Workshop structure

	Workshop 1: Actors	**Workshop 2: Behaviours**	**Workshop 3: Drivers**	**Workshop 4: Interventions**
Date	Nov 2025	Jan 2026	Jan - Feb 2026	Feb 2026
Format	Online	In-person	In-person	Online
Attendance	Core group	Wider network	Wider network	Core group
Length	2.5 hours	2.5 hours	2.5 hours	2 hours

The workshop series was designed to iteratively build Behavioural System Maps containing the following elements (Figure 3):

Figure 3: BSM Elements



The workshops were bracketed by pre-workshop preparation and post-workshop synthesis, and short reflection phases between sessions to consolidate and refine the map (see Annex A1 for details).

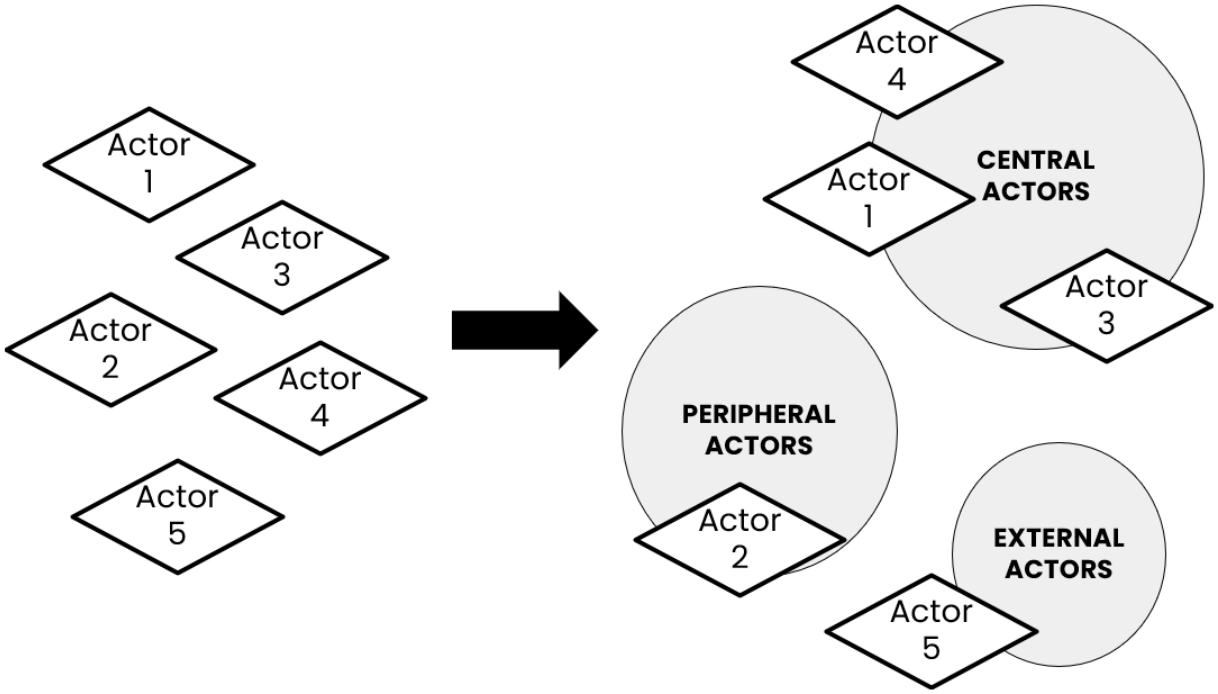
Workshop 1

Workshop 1 established the foundations for BSM, introducing the methodology and defining the scope of the system. Progress made in Workshop 1 is highlighted in Figure 4.

Key components included:

- **Introduction to BSM:** Participants were introduced to behavioural science, systems thinking, and participatory approaches; explanation of key mapping concepts (Actors-Behaviours-Connections-Drivers).
- **Accessibility and language**: Participants reviewed BSM terminology and identified barriers to participation, informing adaptations to later workshops.
- **Defining the system:** Participants defined a shared systems objective for digital inclusion in their neighbourhood and explored system boundaries (in-scope, out-of-scope, uncertain elements).
- **Mapping Actors:**
    - Review, expansion and refinement of Actors identified via pre-workshop inputs
    - Initial exploration of relationships, dependencies, and tensions between Actors

Figure 4: Workshop 1 Map Progress



Workshop 2

Workshop 2 shifted focus from Actors to the Behaviours taking place within the system.

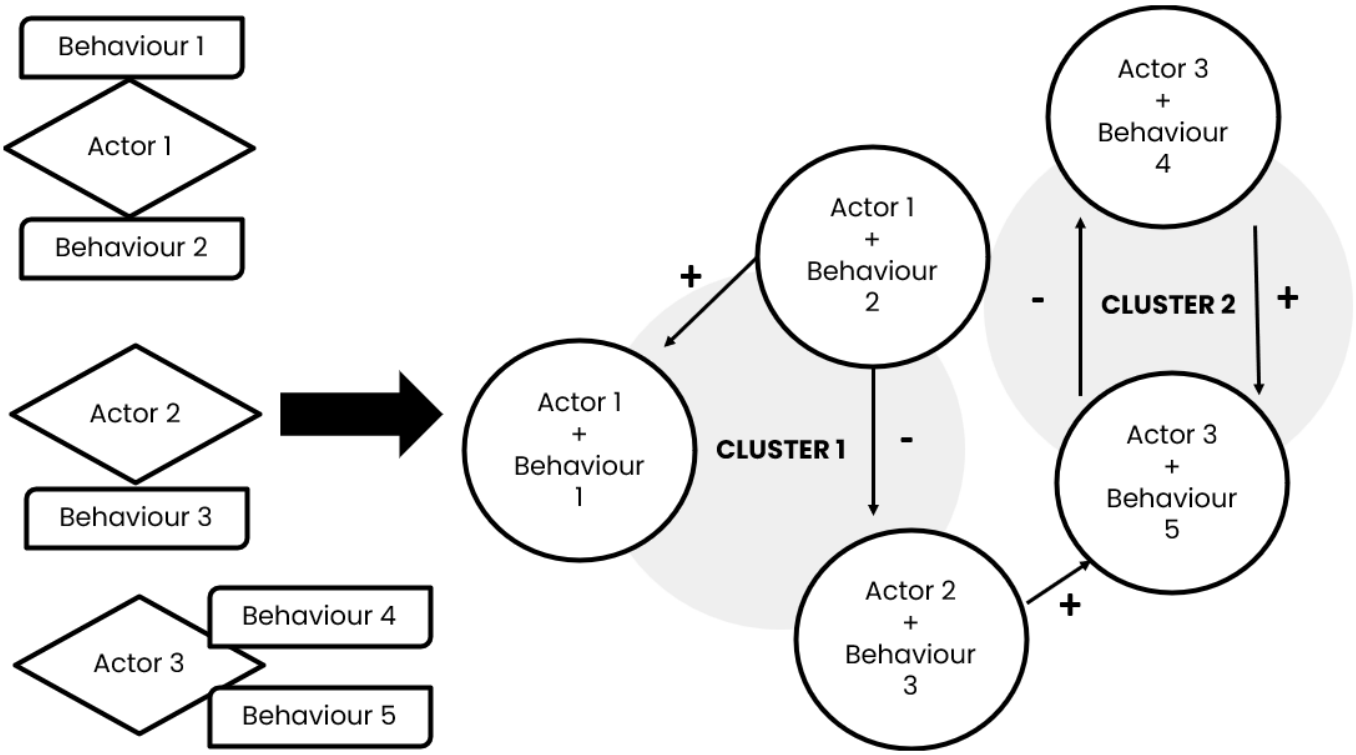
Key components included:

- **Review of the draft map:** Participants refined the system objective and Actor groupings (central, peripheral, external).
- **Behaviour mapping:**
    - Identification of Behaviours of older residents in relation to digital inclusion
    - Identification of Behaviours of important system Actors

It is worth noting that this stage focused on specifying Behaviours in observable terms – for example, 'accessing online services', 'offering digital support', or 'referring residents to digital training' – rather than discussing digital exclusion only as a broad social issue. Crucially, this behavioural specification enabled the subsequent analysis of what influences these actions and where interventions may prove most effective.

Following the workshop, inputs were translated into clusters of Actor-Behaviour nodes. Connections between Actor-Behaviour nodes were drafted (positive, negative, ambivalent) as illustrated in Figure 5 below.

Figure 5: Workshop 2 Map Progress



Workshop 3

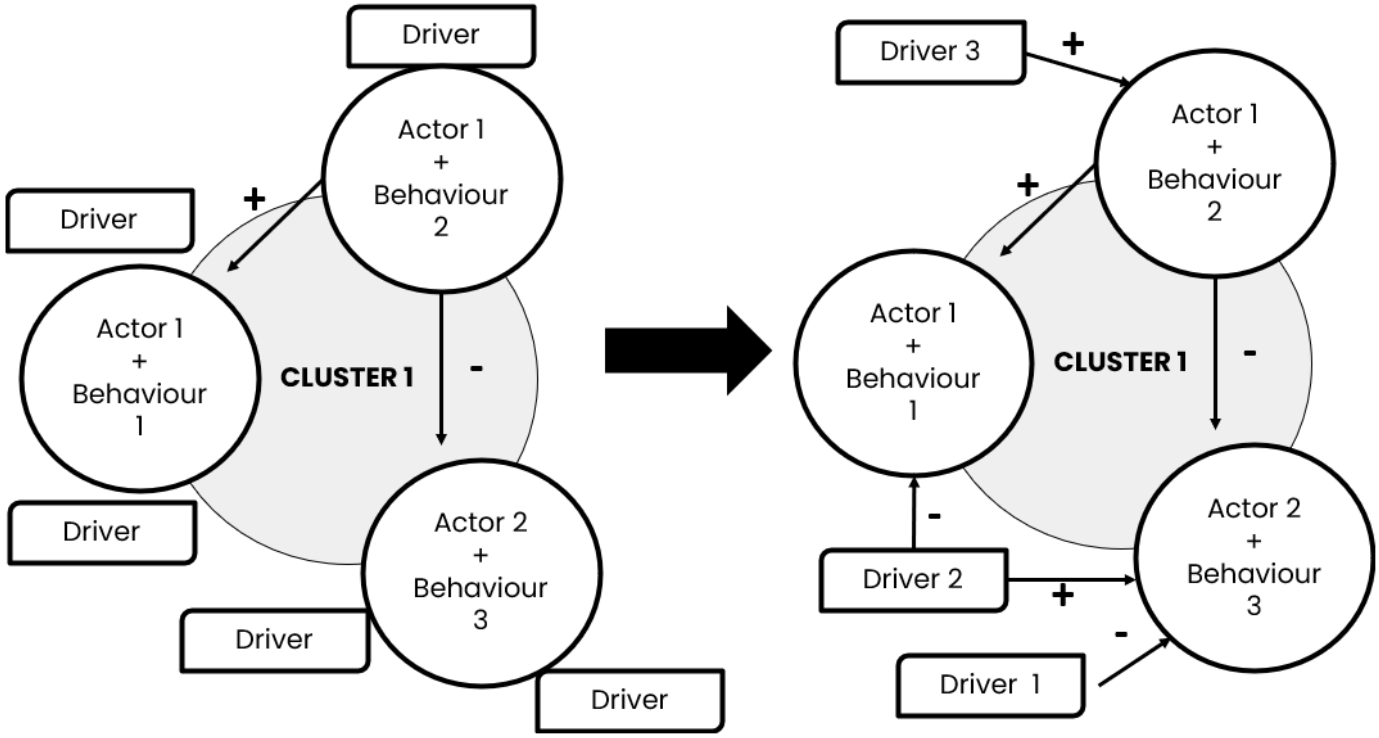
Workshop 3 focused on identifying the Drivers influencing Behaviours, building on the Actor-Behaviour map developed in previous sessions.

Key components included:

- Review of the draft map: Participants reviewed clusters of Actor-Behaviour nodes, adding missing Behaviours and refining Connections.
- Introduction to the COM-B model: Participants were introduced to the three main categories of influences on behaviour (Capability, Opportunity, Motivation) and its use as a diagnostic tool for identifying Drivers. COM-B was primarily used as a discussion aid to help workshop participants explore a broad range of behavioural influences such as skills and knowledge, social relationships, environmental constraints, and habits or beliefs.
- Driver mapping:
    - Individual idea generation of influences on Behaviours
    - Group prioritisation and placement of key Drivers onto Actor-Behaviour clusters

Behaviours were subsequently streamlined, Connections adjusted, and Drivers organised into specific and overarching Drivers, as highlighted in Figure 6.

Figure 6: Workshop 3 Map Progress



Workshop 4

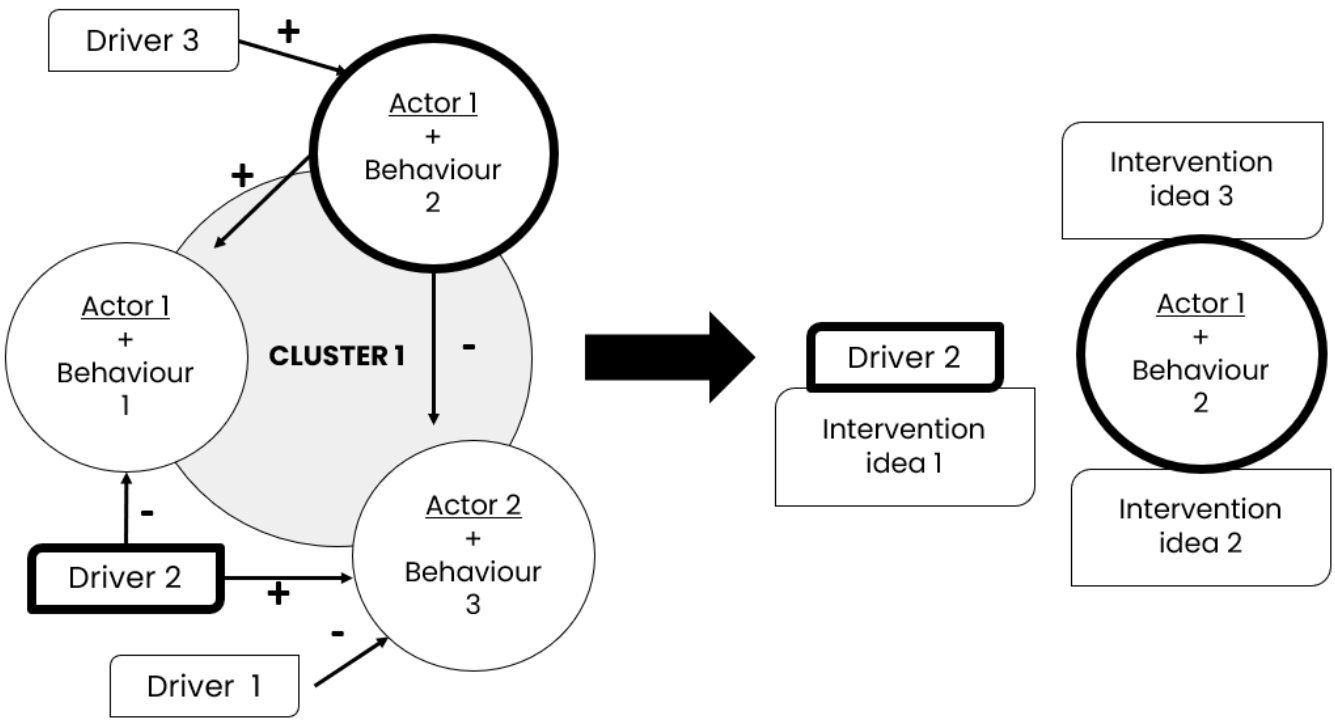
Workshop 4 translated the system map into action by identifying leverage points[22] and generating intervention ideas associated with leverage points (Figure 7).

Key components included:

- Review of the draft map: Participants explored and annotated the near-final map, further refining Behaviours and Drivers.
- Identifying leverage points:
    - Participants identified areas where change could have the greatest system impact
    - Feasibility was assessed based on practicality and local context
- Developing intervention ideas:
    - Participants drafted intervention ideas based on feasible leverage points, including revisiting ideas from previous workshops
    - Group discussion explored feasibility and alignment with system objectives

A final reflection phase synthesised these ideas into a structured longlist of interventions, which were then prioritised via the APEASE framework. Prioritisation was then further informed by synthesis with spatial analysis and resident engagement outputs.

Figure 7: Workshop 4 Map Progress



[22] In BSM, feedback loops are typically analysed explicitly to identify reinforcing dynamics and resistance, which are relevant for the identification of potential leverage points. We originally planned for feedback loop analysis to be part of the collaborative workshop process. However, limited workshop time and the complexity of the maps meant that participants did not systematically identify feedback loops. Instead, leverage points were identified through facilitated discussion, drawing on participants' experience and judgement about where change was most critical within the local system; while we highlight positive and negative reinforcing cycles in the analysis where these were explicitly discussed during workshops or validation exercises, this represents a simplified approach and is recognised as a limitation of the process.

Lessons Learned

Across the workshop series, several overarching lessons emerged:

- **A consistent participant group supports stronger mapping.** Bringing in new participants part-way through the process required time to explain the method and recap earlier outputs, reducing time for deeper discussions. A stable group of core stakeholders depending on the system (e.g. 4 to 6) representing a range of relevant perspectives is likely to enhance continuity and a richer understanding of the system.
- **A narrower system objective keeps the map manageable.** Participants often developed broad objectives, which in turn produced large and complex maps. Refining the objective early on and throughout the process, alongside regular reminders to focus on the objective during mapping activities, would help focus discussion and generate a more actionable set of Actors, Behaviours, and Drivers.
- **Asynchronous reflection tasks had limited value without structured facilitation.** Participants often had limited time to complete reflection exercises between workshops, which are critical for consolidating outputs and preparing the map for the next step. Short, facilitated reflection sessions during sessions may be more effective than independent follow-up tasks.
- **Workshop format affects participation.** In-person sessions tended to support collaborative mapping and relationship-building; online workshops worked well for review and refinement. However, participants differed in their preferences and confidence levels with digital tools, so format decisions need to consider accessibility.
- **Bringing in data and insights earlier would strengthen the mapping process.** Evidence from other sources (e.g. spatial analysis and resident engagement insights) should be brought into the process early, ideally prior to Workshop 1. This would help shape the map in real time, especially where knowledge gaps around the perspectives of older residents arise, and improve the grounding of intervention ideas.
- **Upfront information gathering through spatial analysis and community engagement adds value.** These insights can provide rich data to help workshop participants to map, reducing the impact of knowledge gaps or assumptions during the BSM process.
- **Intervention ideas emerge early and should be captured.** Participants often moved naturally toward solutions before completing mapping stages. These ideas are valuable and should be recorded throughout, while facilitation keeps attention on the immediate task at each stage.

Neighbourhood Spatial Analysis

Overview

Geospatial analysis was undertaken to complement the BSM approach. While traditional indices may typically rely only on nationally available datasets, this methodology overlays distinct analytical lenses including but not limited to open-source data ensuring that the findings are locally validated. The spatial analysis explores the neighbourhood as a whole, as opposed to looking at older residents as a single, homogeneous group. In this way our participatory approach to all lenses follows a similar principle as the Digital Inclusion Action Plan.

Spatial units and selected indicators for the standard index (Layer 1)

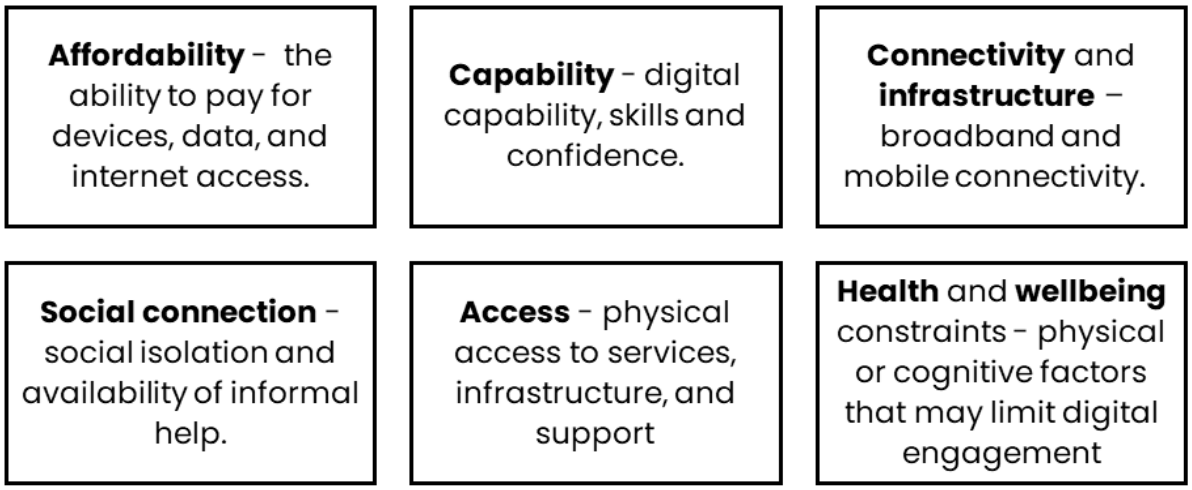
The foundation of the analysis is built upon a standardised open-source data Composite Indicator (CI); this includes all Lower Layer Super Output Areas (LSOAs) within each local authority (LA), creating a LA index[23]. Each team selected LSOAs, to which we refer to as 'selected neighbourhood(s)'. It should be noted that selected neighbourhoods do not always align to the LSOA boundaries, meaning data at the LSOA/OA level can sometimes be partly included in them.

The number of LSOAs within each selected neighbourhood varied, from 1-2 aligned LSOAs to up to 16 LSOAs in one neighbourhood. All findings are centred around understanding the focus areas as close as possible, while also referring to the wider local and national context.

Given the multidimensionality of digital exclusion, there is not a standard way to measure it. We followed best practice to develop a clear analytical process, outlined in Annex A2.

The CI synthesised 11 equally-weighted individual indicators into a one-dimensional index score for each LSOA using geometric aggregation and the final score was rescaled to a 0-1 range within each LA. The indicators fit into six domains:

Figure 8: Principal domains/themes[24]



[23] The primary spatial unit of analysis is the Lower Super Output Area (LSOA) and Output Area (OA), using 2021 boundaries. LSOAs are small, statistically stable geographies commonly used in national datasets and allow meaningful variation to be identified within neighbourhoods. An LSOA is a group of OAs in the same geographical area and tends to contain 1,000-3,000 residents and 400-1,200 households.

[24] Capability throughout the geospatial analysis differs to that of the COM-B definition, and is defined as per the Digital Propensity Index – see Table 2 below.

A framework of datasets used for each theme at the LSOA level is shown below. Some themes are made up of 2 components, called a primary and secondary indicator, both holding the same weight. This helps to gain a better understanding for themes where the primary indicator might not provide enough information.

Each LSOA was assigned a dominant digital exclusion theme based on the highest-scoring indicator with the greatest scaled values for that area. This prioritises the intensity of the leading indicator over the number of variables per theme, ensuring that a single strongly-performing variable within a theme is weighted appropriately against themes with more indicators.

In parallel, a risk category was assigned to each LSOA based on the count of indicators scoring above 0.6 on the within-LA scaled 0-1 range, with thresholds calibrated to the empirical distribution of the data: Low (0-1 indicators), Medium (2-3), Medium-High (4-5), and High (6 or more). Scoring reflects relative exclusion risk within each LA rather than absolute levels.

Therefore, the CI provides a quantitative picture of digital exclusion risk or likelihood is most concentrated across the borough. This thematic/risk classification illustrates the main driver for digital exclusion and ensures results remain interpretable and directly inform targeted interventions.

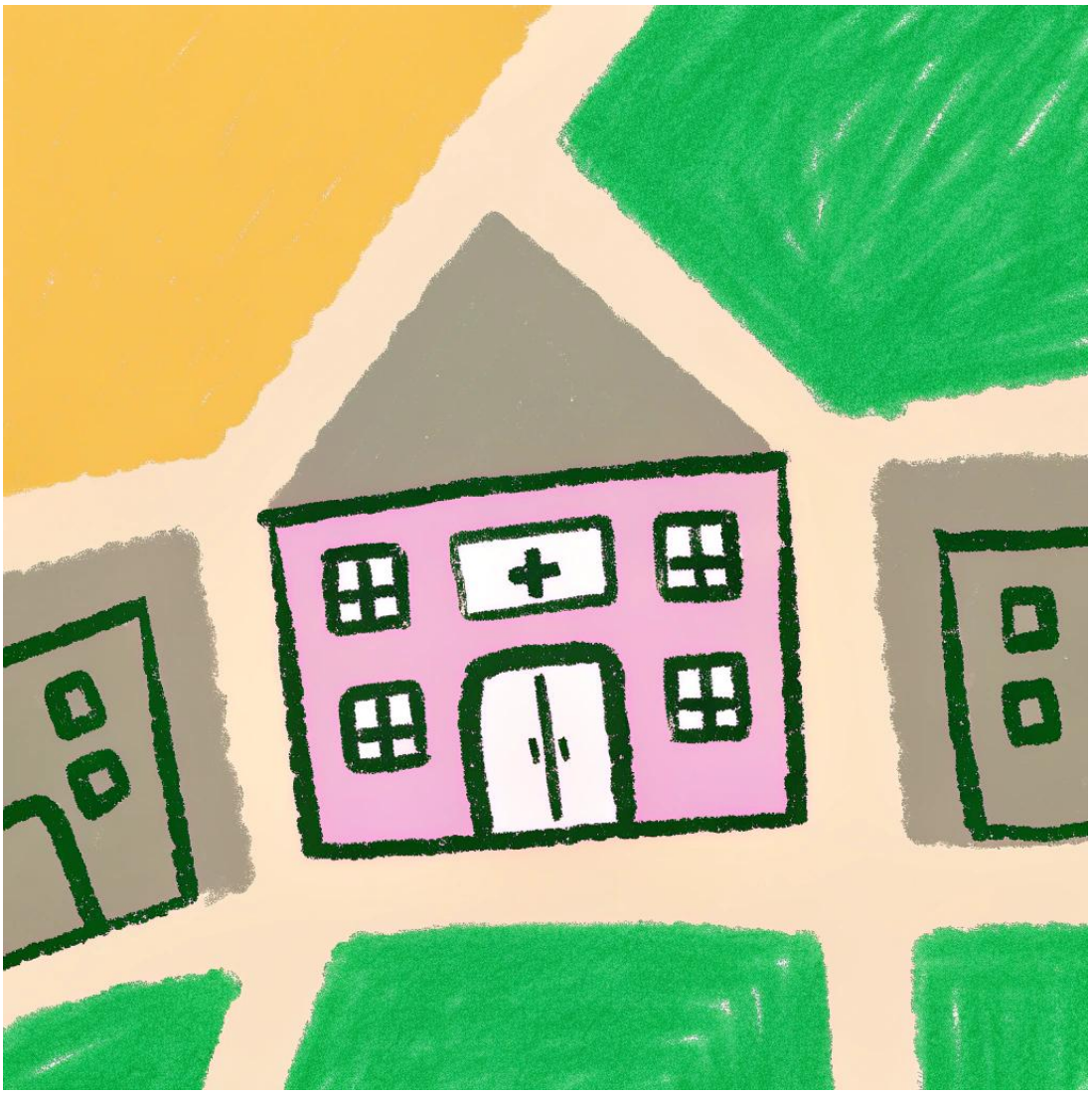


Table 2: Principal themes and their relevant indicators[25]

Theme	Primary indicator	Source	Notes	Secondary indicator
Affordability	Income Deprivation Affecting Older People Index (IDAOPI)	Indices of Deprivation (IMD 2025)	A financial indicator for people aged 60+	N/A
Capability	Digital Propensity Index (DPI)	Census 2021	A behavioural proxy; measures whether people used their digital skills when given the opportunity.	Adult Skills IMD sub-domain (literacy and maths skills)
Access (formal support)	Geographical Barriers to Services sub-domain	IMD, 2025	Measures physical proximity to key services. Uses the DfT Connectivity Tool.	N/A
Social connection	Proportion of one-person households aged 65+	Census 2021	Demographic and social factor	English as a Second Language
Health and wellbeing constraints	Disability prevents day-to-day activities a lot	Census 2021	Individuals who report day-to-day activities as limited by long-term physical or mental health conditions or illnesses are considered disabled.	N/A
Connectivity & infrastructure	Broadband coverage and performance (residential)	Ofcom 2025	Percentage of premises unable to receive 10 mbit/s.	Superfast broadband (SFBB) availability

[25] Income Deprivation Affecting Older People Index (IDAOPI) and Proportion of one-person households aged 65 and over are indicators that measure the older populations specifically.

Box 2: How spatial maps interacted with BSM and community engagement

The spatial maps were informed by and referenced against the other analytical outputs, created in parallel. These include the physical asset locations and classifications, which were directly drawn from the actors identified throughout the Behavioural System Mapping (BSM) workshops.

The final BSM maps identified key organisations, community resources and digital service providers key to each neighbourhood through stakeholder participation, which ensured that the physical assets in the spatial analysis reflect local understanding.

Qualitative insights gathered through public engagement further informed the interpretation of spatial findings and validated the insights.

Indicators for the 'bespoke' index (Layer 2)

The second layer is a mixed-methods complement to the standard quantitative index. It is based on local datasets, information and knowledge relevant to each neighbourhood, shared by project partners. This layer transforms the map from a local authority study into a bespoke neighbourhood analysis which helps to confirm the patterns revealed by the standard index and to understand more about what is driving them locally.

Factors differed according to local context; however, some variables were relevant to all neighbourhoods in Layer 2:

- Ageing in Place Classification (AiPC)[26];
- Output Area Classification[27];
- Output areas with residential download broadband speed of less than 10mbit/s[28]; and,
- The location of key assets - e.g. libraries, community centres, health facilities - are assessed spatially to understand access to support. Accessibility analysis focused on proximity-based measures, including walking and driving catchments, public transport connectivity, parking availability and accessibility features at the asset[29]. For London neighbourhoods the Public Transport Accessibility Levels (PTAL) bus scores were used, while for the rest a walking/driving catchment was created[30].

An information request was distributed to partners to collect data about key assets. This included information on free Wi-Fi, device loan schemes, devices available to use on site, digital training/courses, digital support and local knowledge of them. Asset attributes are not included in the index score but instead are used for context.

For neighbourhoods with higher proportions of people with English as a second language we assessed the census variable - *English as a second language: do not speak well/at all*. For Havelock estate, a key aim was income maximisation, therefore household deprivation at the OA level was also tested.

[26] Bespoke geodemographic classification targeting people aged 50 and over in England at the LSOA level. Source: The Geographic Data Service

[27] A hierarchical geodemographic classification at the Output Area level. Source: The Geographic Data Service and ONS,

[28] Download broadband speed of less than 10mbit/s can be a more affordable option but often limits use to a single device and for basic tasks like searching the web. This dataset was sourced from Ofcom.

[29] For Waltham, the NELC team provided information on streets where older-people residential schemes with properties for over 60s are predominantly located. Each asset was buffered at 800m, a typical walking distance of about 10 minutes from the residential areas.

[30] PTAL bus scores were sourced from TfL; the walking catchment was created at 800m; the driving catchment was measured in minutes using the road network at 10- and 15-minute distances.

Community Engagement

Community engagement was not part of trial scope or required for BSM. However, it was recognised by the participating areas as being of value to bring insights to understand the nature of the over 60s cohort Behaviours and Drivers, and to validate the BSM process. Community engagement was undertaken in three neighbourhoods to capture data on lived experience, attitudes and perceptions of residents aged 60+. A mix of methods were deployed which are summarised below:

Table 3: Community engagement methods

Neighbourhood	**Method**	**Sample**
Horn Park	In-person 1:1 discussion	6 people aged 60+; mix of sex
Havelock Estate	In-person workshop and 1:1 discussion	7 participants; aged 60+; mix of sex
Waltham	In-person workshop and 1:1 discussion	14 participants; aged 60-90; mix of sex

The method deployment was necessarily tailored to the neighbourhood and community, given the time and resources available (including venues):

- The engagement at Havelock Estate was led by the Ealing team and a community connector, with the use of narrative 'day-in-the-life' activities and story cards to prompt (e.g. 'If I was confident online I could…',) as resident-led ways to reflect and review parts of the BSM.
- Engagement in Waltham and Horn Park were driven with co-design of discussion guides with the DG Cities, to explore different BSM elements with story-telling (first person or hypothetical examples) and matching of behaviours and drivers. These elements were: (i) current digital engagement across different uses (e.g. communication, information search, public services, entertainment); (ii) reasons for use levels (drivers); (iii) anecdotes on good/ poor online experiences (and what support can look like); (iv) testing intervention ideas to gather general views, questions and comments.

It was also important to introduce the engagement activities, across all areas, with clarity on its purpose, the value of different experiences (no right or wrong answers), and to use 'ice-breaker' questions on the neighbourhood. In wrap-up, relevant information and support was signposted to the participants including leaflets on local drop-in support (NELC).

Data synthesis

The research team conducted a series of five dedicated synthesis workshops which focused on each neighbourhood to integrate the diverse findings from each location. Prior to these sessions, the research team compiled the emergent findings from the behavioural systems maps and intervention blueprints, a geospatial analysis summary, and data gathered during community engagement. Workshop activities provided a structured approach of data immersion, reflection, discussion and group synthesis. This approach enabled data validation across data streams – for example where spatial analysis validated or challenged resident sentiment or BSM behaviours, and where BSM maps explained geographic characteristics or anomalies.

There were several key benefits to this method:

- Triangulation ensures a much more robust understanding of digital exclusion with the mix of data and insights ultimately highlighting the limitations and benefits of BSM as a method.
- Collaborative synthesis enabled the multidisciplinary research team to challenge individual biases.
- Fragmented data points, or those which lacked clarity were supported with context and narrative, helping to distinguish between hyper-local digital inclusion issues and broader, systemic challenges that require policy intervention and system change.

For example, by reading the spatial and local data through the behavioural model and comparing it to the experience of residents shared by them, we can distinguish between an individual who is likely to lack the physical opportunity to get online (e.g. devices) and one who is likely to lack the motivation or capability in each neighbourhood. This ensures that the resulting intervention ideas target the root cause of exclusion as close as possible for each neighbourhood.

Ongoing reflection and evaluation

A key part of the trial - and its test-and-learn approach — was the use of ongoing reflection and evaluation of the BSM methodology for understanding digital inclusion and interventions at the neighbourhood level. This enabled adaptation through the trial; brought together key learnings and recommendations, which have informed this report and accompanying guidance; and provide useful feedback on the study's outcomes. The ongoing reflection and evaluation were composed of the following processes and methods.

Table 4: Ongoing reflection and evaluation

Process	Method	Application
In-workshop reflection (all)	At the end of each workshop, the group provided feedback; including what was useful, surprising or could support the method.	Ongoing - These reflections helped inform refinements of the method for the individual area. These were also used to populate the reflection tracker (below).
Researcher reflection (DG Cities)	The DG Cities research team used an internal document to track reflections for each stage of the BSM, covering strengths, limitations, challenges and mitigations. Differences across areas were also incorporated. This enabled an ongoing 'diary approach' to track 'real-time' learning and understanding of 'what works' through the trial. This was then available for the evaluation processes at the trial end.	Ongoing - This exercise helped inform refinements of the method for subsequent workshops and identified key points to note for synthesis. This was then brought into the 'end of trial' processes to synthesise insights, findings and recommendations for the report and guidance
Participant reflection (26 participants)	In-depth reflection discussions with participants post-workshop 4. A semi-structured interview guide was developed. This covered: 15 discussions with 20 participants. To complement this, non-core team participants were invited to respond to a questionnaire or have a brief conversation to conveniently share their feedback. This covered: Six additional participants.	Towards trial end - Interview transcripts and questionnaire responses were synthesised for common, area-specific, and 'edge' insights, themes, views and experiences. This informed the trial findings, the benefits and limitations of BSM, and shaped the guidance.
Study KPIs (All area core teams)	Pre- and post-questionnaires for participants. Covering the KPIs and other questions for feedback on their experience, other outcomes, and what worked and what didn't work.	Trial end - Questionnaire responses were analysed, to inform report themes and findings and report back on the study KPIs.

To report whether the intended outputs and outcomes of the trial have been delivered, the following metrics were proposed and used:

Output deliverables:

- Four BSM workshops delivered per local authority (20 total).
- Minimum of 15 participants per authority, spanning council, VCS, and community organisations.
- One Behavioural Systems Map and Intervention Blueprint per authority, each with at least three actionable interventions.
- The intervention Blueprints and the BSM Toolkit are disseminated, where this is then tracked through downloads and requests.

Outcome metrics:

- 80% of participants report that Intervention Blueprints improved the tailoring of local strategies.
- 75% of authority and VCS staff reporting increased confidence to apply BSM independently.
- 80% of older resident participants felt their perspectives were valued.
- Three authorities incorporate BSM-informed interventions into strategic plans within six months.
- Evidence of stronger cross-partner collaboration, demonstrated through new joint initiatives.

The reflection and evaluation processes have fed into this report and the guidance and toolkit outputs. More detail on the evaluation, and reporting on these metrics, is presented in Annex 1.

Neighbourhood studies

In this section we detail in turn the outcomes for each of the five neighbourhood trials, covering the four workshops in each neighbourhood.

Each neighbourhood section below covers the following: (i) an overview of the neighbourhood and its digital inclusion challenge; (ii) a summary of its synthesis; (iii) the Behavioural Systems Map, covering objectives and clusters; (iv) spatial analysis findings; (v) community engagement findings; (vi) the intervention blueprints; and (vii) reflections, learning and next steps. A **Behavioural System Map** has been produced for each neighbourhood and a link to these maps is provided in each neighbourhood section below.

Horn Park

Overview

Horn Park is a neighbourhood in the south of the Royal Borough of Greenwich which borders the London Borough of Lewisham.

- **Population:** 3,196 people.
- **Age:** Residents aged 60+ make up 18.5% overall.
- **Ethnicity:** 58.1% of people of White ethnicity, 4.2% of Black, Black British, Black Welsh, Caribbean or African ethnicity, 9.9% of Asian, Asian British or Asian Welsh ethnicity and 11.2% are of mixed, multiple or other ethnic groups.
- **Household composition:** 22.3% of households are one person households.
- **Health and wellbeing:** In 2021, most residents (79.9%) reported good or very good health while the remaining were in fair (13.6%), bad (4.9%) or very bad health (1.6%). Fewer (18.5%) residents have a disability and 8.8% identify as an unpaid carer.
- **Deprivation:** 32.8% of households are deprived in one dimension, 19.4% in two, 8% in three or more.

Digital inclusion challenge

Horn Park was selected for the trial for several reasons. The neighbourhood is a known area of high risk of digital exclusion when considering factors such as deprivation, education, health and disability, English as a second language, and income. Older people are also known to experience more isolation, and at present there is no active community centre in the neighbourhood. Royal Greenwich Council also recognises that community participation in Horn Park is low, compared to other parts of the borough.

The Council and wider health system has recognised Horn Park as a focus area of development. A steering group of key local Actors has been established to guide efforts to support the neighbourhood, and work is underway to re-develop local health infrastructure.

Royal Greenwich Council is undertaking the BSM approach on Horn Park in support of its wider digital inclusion programme and will utilise the trial to uncover the root causes of exclusion among older residents. Activity on Horn Park as part of this trial is intended to support action against the following DSIT Digital Action Plan Priority:

- E. Community engagement (e.g. how digital inclusion can strengthen social cohesion and community networks)

Royal Greenwich stakeholders hope to utilise the method to enable targeted, evidence-based interventions that strengthen skills, confidence, and service access, complementing existing training, connectivity, and device initiatives while fostering sustainable, community-led digital inclusion and measurable outcomes across Greenwich.

Synthesis summary

The following sections present detailed analysis and insights of BSM and resulting intervention blueprints, as well as complimentary geospatial analysis and community engagement. Commonalities and differences between methods are explored in the Findings section.

This summary presents what emerged across these methods through the synthesis approach that is detailed in the methodology section above:

- **Digital exclusion in Horn Park is driven by foundational system constraints rather than isolated skills gaps.** BSM shows that the lack of physical spaces and limited engagement pathways suppress digital participation. This is reinforced by engagement insights, which confirm the importance of trusted social spaces, and spatial findings on poor accessibility of existing options. However, spatial analysis and engagement highlight capability as an important driver, whereas skills conversations were overshadowed in the mapping workshops by more significant constraints.
- **Fragmented and exclusionary information ecosystems reinforce disengagement from support and services.** BSM identifies a reliance on digital channels (e.g. WhatsApp, Facebook) that inherently exclude the most digitally excluded; engagement data confirms distrust of these platforms. This means that those most in need are least likely to receive information, compounded by inconsistent offline alternatives.
- **Access to services is shaped by cumulative burden across multiple barriers rather than a single dominant constraint.** Spatial analysis highlights concrete barriers (financial, health, connectivity), which manifested in the BSM process as two overarching, behavioural outcomes: reliance on others or disengagement from digital services. Engagement added nuance to this in illustrating that selective use is often based on interest versus perceived risk, pointing towards a system where barriers interact rather than operate independently.
- **Trust operates as a critical system lever but is unevenly distributed across actors and spaces.** BSM surfaced trust as central to engagement, with reliance on informal actors (e.g. family or neighbours) in the absence of accessible, trusted venues within the neighbourhood - as highlighted by spatial analysis. This was reinforced by insights from community engagement which showed hesitancy toward formal or unfamiliar venues and reluctance to engage with institutional offers.

- **The system shows emerging but fragile momentum.** BSM identifies strong coordination efforts (e.g. an established steering group, active community engagers) and potential assets (e.g. St Mildred's Church, The Source), yet these are constrained by limited data on need, uncertain sustainability, and limited physical accessibility. Engagement and spatial insights both reinforce this fragility, pointing to low participation, unclear reach, and structural barriers that limit system-wide impact.

Behavioural Systems Map

System Objective

In Workshop 1, the core participant group jointly established the following system objective based on the above digital inclusion challenge for the Horn Park neighbourhood:

Our goal is to reactivate connections and rebuild trust of older residents in Horn Park towards the Council and between one another by co-creating long-term, needs-led digital inclusion solutions that reduce isolation and foster a sense of belonging in a neighbourhood with limited community spaces and historical barriers to engagement.
This involves:

- Recognising the legacy of isolation and low community activation in this neighbourhood;
- Helping residents feel listened to and creating a voice for them in local decision-making;
- Enabling them to fully participate in both digital and non-digital community life; and,
- Harnessing emerging changes and solutions in the Digital Inclusion and community engagement space.

Overview

BSM on Horn Park highlights a system characterised by strong relational assets and emerging coordination, but critical constraints including a lack of physical infrastructure, limited insight into the scale of digital exclusion, and cumulative barriers to resident engagement.

A central insight from the mapping process is that digital exclusion in Horn Park, at this stage, is not regarded as primarily a skills issue. Instead, it is rooted in more foundational challenges: the absence of accessible community spaces, limited trust in local institutions, and a lack of clear, inclusive pathways for engagement. Mapping with stakeholders resulted in identified Behaviours and Drivers that did not prominently feature digital skills. A clear finding here is that participants were unable to identify where or how skills support could realistically be delivered in the current system in the absence of the foundational factors highlighted.

There is, however, clear evidence of high momentum and opportunity in the neighbourhood, particularly among trusted local Actors coordinating to reactivate community connection. Emerging spaces such as St Mildred's Church and the ongoing renovation of The Source present important current and future leverage points for successful pathways towards the digital inclusion of older residents. However, it is also important

to note that this is counterbalanced by system fragility due to uncertain funding, reliance on informal roles (e.g. ad-hoc support from local shops) and a lack of data on the scale and nature of digital exclusion.

The mapping process also revealed a complex interaction of Behaviours and behavioural Drivers: disengagement with digital services driven by cumulative administrative burdens and negative prior experiences, limited awareness of support due to exclusion from digital communication channels, and the absence of physical community spaces affecting both social connection and service access.

Overall, the neighbourhood digital inclusion system for older people in Horn Park necessitates building the foundational conditions for engagement (i.e. trusted physical spaces, coordinated insight, and inclusive communication) as a prerequisite for effective digital inclusion interventions.

The full Behavioural Systems Map is accessible on the project website.

Cluster analysis

BSM revealed 5 clusters for the Horn Park neighbourhood digital inclusion system:

Cluster 1: Understanding Barriers and System Coordination

Cluster 1 illustrates strong relational assets and high momentum within the neighbourhood system and its coordinating Actors, but it is limited by fragmented insight into the scale of digital exclusion and uncertain sustainability of current projects.

The mapping process highlighted a well-developed coordination infrastructure, with Community Engagers, Citizens UK, and the Horn Park Steering Group playing central roles. Community Engagers were consistently identified as an influential Actor: as 'familiar faces' in the neighbourhood and due to their intrinsic motivation to help older residents to share openly, they are able to generate rich, trust-based insights. In parallel, Citizens UK's ongoing deep listening project at Horn Park Primary School and the Steering Group's role in coordinating activities and shaping a strategic vision demonstrate a strong foundation for collective action.

However, stakeholders in the mapping workshops noted that these activities are not yet translating into a coherent understanding of the digital exclusion of older people on Horn Park. The mapping process highlighted a lack of clarity on the current level of digital knowledge and skills for older people, limiting the ability of the Royal Greenwich Council's Digital Inclusion Team to design targeted interventions. This reflects a key system bottleneck: the community infrastructure for gathering insights is in place but synthesis and application to the digital exclusion challenges older people face is limited.

Crucially, the current momentum is also fragile. Workshop participants noted risks linked to short-term funding (e.g. Citizens UK), clarity over how to support volunteers, and uncertainty around the Royal Greenwich Council's long-term prioritisation of Horn Park. Stakeholders highlighted that without clarity, the system risks losing its current coordination gains.

Cluster 2: Accessing Services

Cluster 2 cluster reflects a system where increasing digitalisation creates cumulative burden, driving disengagement.

Mapping by stakeholders highlighted that older residents are increasingly faced with digital-only access points to essential services, including online banking which is exacerbated by only one cashpoint on the estate, council tax payments, parking, housing services, and benefits applications. These overlapping demands create cumulative digital and administrative burden for older people, highlighting a complex interplay of capability barriers in the form of digital skills, opportunity barriers like access to devices and connectivity, and motivational barriers related to the willingness to use digital services.

Behaviourally, this pressure contributes to the disengagement of older people, reinforced by several attitudinal Drivers explicitly identified in the mapping; examples of which include a nostalgia for how things used to be, an expectation of accessible offline services in exchange for council tax, and general apathy due to a lack of perceived action from the council. Fear of making mistakes, scams, and embarrassment at their own lack of digital skills appear to further suppress engagement.

A key coping mechanism the workshop participants highlighted is the reliance on friends and family, though this is unevenly available and therefore inequitable. Notably, however, the mapping also revealed the possibility for a parallel dynamic: shared experiences of exclusion among older people may foster informal peer support and social connection; this represents a potential entry point for community-based interventions.

Cluster 3: Healthcare

Cluster 3 illustrates how digital exclusion intersects with healthcare access, with emerging but uncertain infrastructure attempting to fill systemic gaps.

The mapping process showed that difficulties in navigating digital systems are particularly acute in healthcare, where older residents must manage appointments, prescriptions, and communications online. Mapping stakeholders felt that these challenges are intensified by the broader lack of physical community infrastructure in Horn Park, limiting opportunities to seek in-person support.

A key future opportunity identified in the mapping workshops is utilisation of The Source, a GP surgery which is currently undergoing refurbishment, and which is intended to support access to digital healthcare. Mapping stakeholders highlighted the risk that uptake may still be constrained by entrenched distrust in local assets; shaped, for example, by community perceptions of limited accessible spaces on the estate in the absence of an operational community centre.

In the meantime, the Royal Greenwich Public Health team plays an important compensatory role to fill key gaps in provision: organising health walks, disseminating information, and informally acting as a community anchor. This activity is recognised as a key bridging role, which will require a sustainable solution over the long-term.

Cluster 4: Community Hubs and Organisers

Cluster 4 reveals a fundamental infrastructure gap, where the absence of inclusive physical spaces constrains engagement but also highlights some upcoming, promising community assets.

A defining feature of the Horn Park neighbourhood system is the lack of accessible physical assets for older residents. The mapping process repeatedly highlighted that existing assets (e.g. Horn Park Primary School) are not designed for or perceived as relevant to older people. Recent developments, such as the closure of a local cafe, further reduce already limited options.

In response, Actors such as the Horn Park Steering Group and the Royal Greenwich Public Health team have developed alternative forms of community engagement, including resident meet-ups and health walks. However, stakeholder mapping highlighted that these may be limited in reach, particularly excluding those with mobility or health constraints.

St Mildred's Church emerged as a key latent asset, with its 'Warm Spaces' sessions on Wednesdays seen as a valuable, low-pressure environment for older residents to get together and connect. However, the mapping highlighted multiple barriers: physical distance to the neighbourhood interacting with mobility constraints and health issues older people face, limited awareness, and potential perceptions of the space only catering to worshippers. This creates a clear opportunity: if repositioned and supported (e.g. transport

to the church, targeted communications and promotion) the church could function as a critical community hub.

Overall, Cluster 4 underscores a foundational system constraint: without physical assets, opportunities for connection, support, and ultimately digital inclusion remain structurally limited.

Cluster 5: Information Flows and Sign-Posting

This cluster shows a fragmented communication ecosystem, where local channels exist but may exclude the most digitally excluded.

Stakeholders identified a mix of digital and non-digital information channels, each with distinct strengths and limitations. Digital platforms, such as the Horn Park Residents Facebook Group and the Public Health Team's WhatsApp group, play an important role in connecting residents and sharing updates; including communications from local councillors. However, access is contingent on device ownership, digital skills, and comfort with online environments.

Workshop participants highlighted several behavioural barriers to engagement with these platforms affecting older people: unfamiliarity with social media dynamics, lack of understanding of content-sharing norms, and discomfort with 'toxic' online interactions in social media spaces. Notably, this discomfort was reported by workshop participants to also affect community Actors, shaping how they engage in these spaces and highlighting a crucial limitation of social media as a place to connect.

Offline, the Royal Greenwich Public Health team newsletter is preferred by many older residents as it provides accessible and tangible information that is less easily 'lost' than digital messages in the WhatsApp group. However, inconsistent delivery and uncertain funding in the future limit its long-term reliability. The local shop also plays a critical role in signposting and insight-sharing, leveraging the owner's intrinsic motivation and local knowledge – it is, however, important to note that this is largely informal and inconsistent, and as such may not have as wide a reach.

Spatial Analysis

Spatial analysis of key data sets for Horn Park was undertaken concurrently to Behavioural System Mapping to support analysis of the neighbourhood.

Digital Inclusion Index

Spatial analysis highlighted that digital exclusion in Greenwich is moderate for many neighbourhoods; three LSOAs have been identified as areas where residents face higher risk of being digitally excluded. The selected LSOAs, which cover Horn Park, have a low-moderate index score (Map A in Figure 9) and medium-high risk category (Map B in Figure 9). This means that digital exclusion is wide: residents may face multiple overlapping barriers simultaneously but no single barrier is severe. Therefore, residents may be at risk of consistent digital exclusion because of an accumulation of multiple moderately rated barriers. The three most common factors likely to be driving digital exclusion in Horn Park are bold in Table 5 below.

About the Index and methodology

Analysis was conducted at the OA and LSOA levels at 2 layers:

Layer 1 (Quantitative) - aggregated national datasets including the 2021 Census and the Index of Multiple Deprivation (IMD).

Layer 2 (Contextual) - local information such as key assets and additional open-source datasets such as English proficiency.

Digital Exclusion Index proxy Indicators (layer 1):

Income deprivation (aged 66+), lives alone (aged 65+), broadband speed, long-term disability, digital propensity, adult skills, geographical barriers to services, EAL.

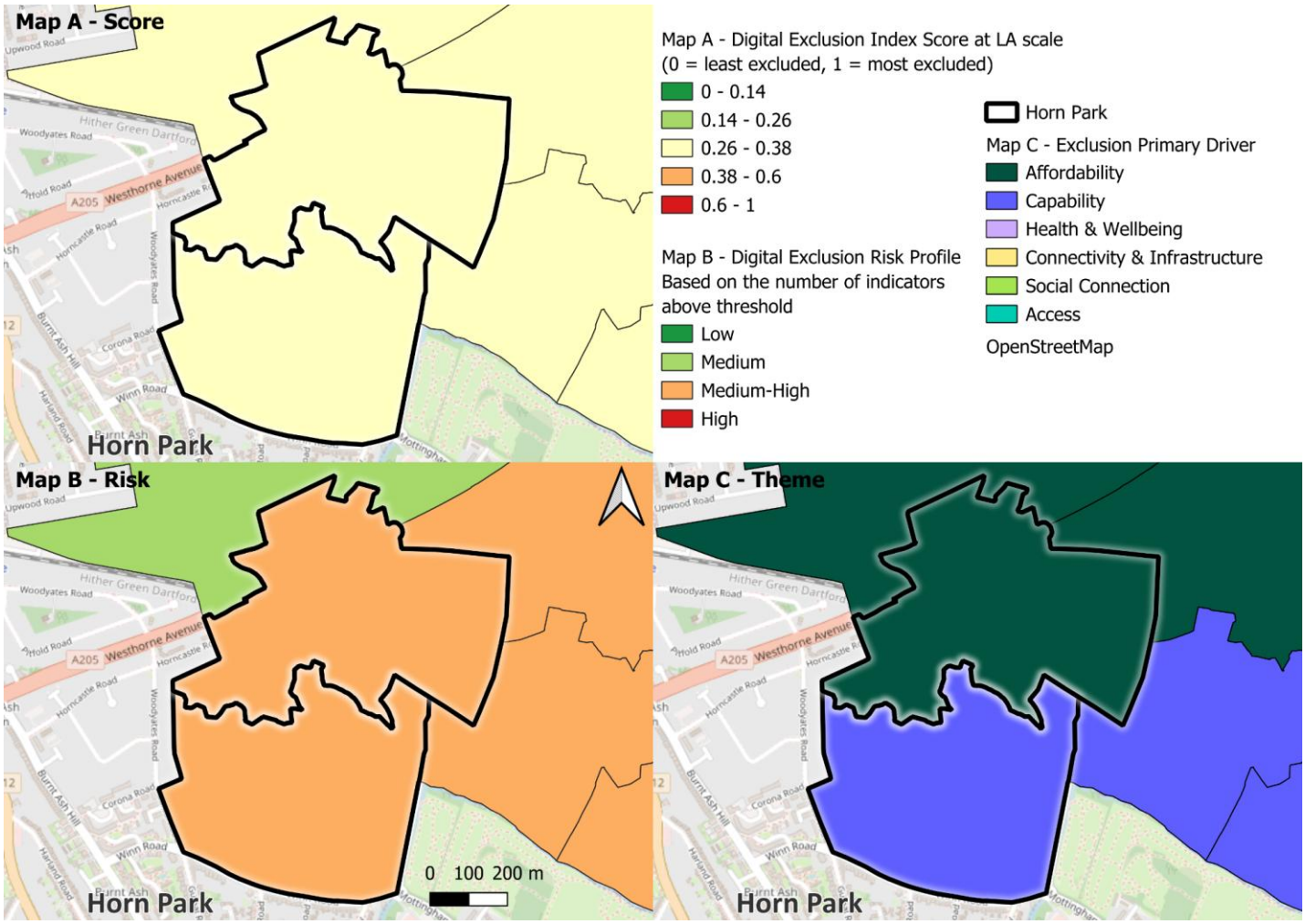
For more information, see the methodology section.

Table 5: Index domains and their indicators

Domain	Indicator(s)
Affordability	**Income Deprivation Affecting Older People Index (IDAOPI)**
Capability	Digital Propensity Index (DPI)
	Adult Skills IMD sub-domain (literacy and maths skills)
Access	Geographical Barriers to Services sub-domain
Social connection	Proportion of one-person households aged 65 and over
	English as a Second Language (cannot speak and cannot speak well)
Health & wellbeing constraints	**Disability prevents day-to-day activities a lot**
Connectivity & infrastructure	**Broadband coverage and performance (residential)**
	Superfast broadband (SFBB) availability – 'UK Standard' or threshold for modern life

The primary Driver analysis of spatial data (Map C in Figure 9) shows that Horn Park residents are likely to face a different Driver: those to the north may experience financial constraints, while those to the south might lack the needed skills to be digitally literate. The capability domain, primary for the south LSOA, is made up by the Adult Skills subdomain of IMD and the Digital Propensity Index. This suggests that residents may also strongly prefer to do things in-person or on paper, which can further contribute to their digital exclusion. This was also highlighted during BSM workshops and community engagement, where attending local events to connect with others was a key highlight. As the digital landscape changes, new digital systems, devices and tasks could pose difficulty to residents of Horn Park even if currently their overall digital exclusion and risk scores are medium-high relative to the rest of the borough.

Figure 9: Digital Exclusion Index Map Outputs



Neighbourhood assets

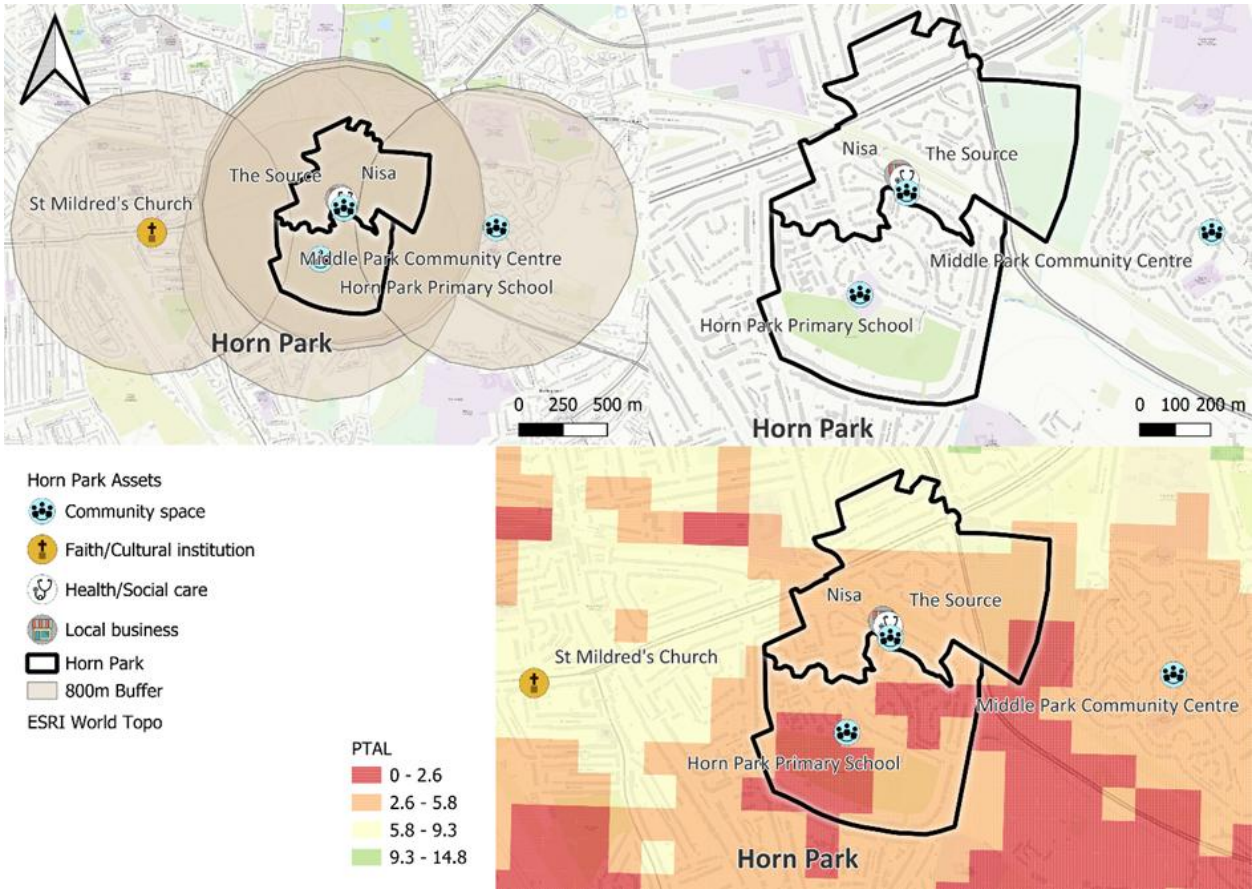
Most neighbourhood Actors defined during the BSM workshops are within the neighbourhood boundary, including the local shop, the Source GP surgery, Horn Park Primary School. Horn Park Community Centre is also within the neighbourhood; however, the community centre operates a childcare provider and is not currently an accessible community asset.

Two Actors which emerged as key from the BSM are outside of the neighbourhood boundary, at a walking distance for some parts of the neighbourhood: St Mildred's Church is accessible by foot for those located to the west of Horn Park; and, Middle Park Community Centre which is located to the east and may be accessible by foot. Both may be perceived as too far for some elderly residents or those with accessibility needs.

Public transport quality was assessed using TfL's PTAL rating. Horn Park and its key assets generally have low bus accessibility, which means that although there are nearby routes, they may not serve the estate directly or may be infrequent. The digital exclusion index also finds physical distance to services (an IMD domain) to be significant for the southern LSOA in Horn Park.

For St Mildred's Church and Middle Park Community Centre which are located outside of the estate boundary, distance and low bus connectivity can have a large impact on the number of residents who can access them. Considering that disability challenges were the second most significant barrier for residents in Horn Park, the need for accessible, local community spaces becomes even more pronounced.

Figure 10: Location of key Actors, PTAL and walkability catchments



Broadband Connection

The Ageing in Place classification for Horn Park is "Peripheral Constrained Diverse Living", "Terraced Mix, Relative Stability", and in a smaller part "Cosmopolitan Family Ageing". These neighbourhoods tend to be characterised as family areas, with a slightly higher proportion of people aged 50-64, lower levels of English language, mixed levels of educational attainment and living in more challenging circumstances compared to the national average.

These are factors that emerged from the spatial analysis as significant but were superseded by financial barriers, significant disability challenges, and internet speed. In this area, five out of eight OAs have slower broadband than what's considered suitable for modern life. This type of broadband is slower, only supports use on one device and basic tasks like searching the web.

Overall, the spatial analysis suggests that residents at Horn Park could be at risk of digital exclusion primarily because of challenging accessibility to services and local assets paired with high levels of people with health conditions or disability, which affects their day-to-day, and weak broadband. To the north of the neighbourhood residents may need financial support, while to the south some may lack the necessary skills to use digital devices. Thus, residents at Horn Park are likely to benefit from interventions that target multiple barriers. These barriers highlighted in spatial analysis align with those surfaced during the BSM workshops.

Horn Park Spatial Analysis Key Findings

- **Digital barriers differ across Horn Park:** residents in the north LSOA primarily face financial constraints, while those in the south LSOA generally lack digital skills.
- **Inadequate broadband infrastructure:** Digital connectivity is a significant physical barrier, with five out of eight Output Areas (OAs) suffering from slow broadband speeds that can only support basic web browsing on a single device.
- **Physical isolation and poor transport:** The neighbourhood suffers from low public transport accessibility (PTAL). This lack of frequent or direct bus routes makes the physical distance to essential services a major contributing factor to overall exclusion.
- **Inaccessible community assets:** While some assets (like the local shop and school) are nearby, the community centre is not available, and key hubs like St Mildred's Church and Middle Park Community Centre sit outside the estate boundary, making them difficult to reach on foot for people aged 60+.
- **Compounding health and disability challenges:** With disability identified as the second most significant barrier for residents, the combination of weak internet at home and poor physical access to external community spaces places disabled and older residents at a particularly high risk of being excluded.

Community engagement

Community engagement for Horn Park was undertaken following Workshop 4.

Previously experienced noted by stakeholders highlighted low participation levels - with the lack of local assets able to host activities, and a legacy of low trust following the loss of a key local health asset. Stakeholders noted that residents report a feeling that the neighbourhood has been 'left behind'. Following Workshop 4, a community drop-in workshop was set up and promoted through multiple channels (e.g. Facebook group, WhatsApp group, emails, door letter drops and by trusted local voices), whilst reimbursement was offered as an incentive. The engagement design and outreach itself demonstrated some of the common issues for Horn Park, which have also been reflected in the BSM:

- Limited local spaces: the original selected venue (a local cafe) temporarily shut down. A new venue was searched for, with St Mildred's Church being the only feasible option (a ten-minute walk or two bus stops away, as shown in the geospatial analysis).
- Low response rates: only one resident signed-up in advance to the session.
- Unclear reach: it was not known how many had seen the promotion or received the messages, as there is little activity on the channels.

The session was run between 10am and 12pm at St Mildred's Church, coinciding with regular activities including its open 'Warm space' with free refreshments; a bible study group; and space for people to come and work remotely. Those who took part were attending regular sessions at the venue.

Six people aged 60 and over of mixed genders attended with varied digital experience and attitudes. Half reported mobility issues. Brief conversations with the church staff and volunteers - also aged 60 and over - were also undertaken. The following insights are therefore illustrative of the small sample achieved. Further engagement will be critical as interventions are tested and developed for delivery.

Current uses of digital technologies:

Smart phones were sometimes used but differences between devices impacted how people used them: Participants expressed the challenge with getting used to a device, and that learning different devices is often not straightforward. One participant had switched to a smaller device and found this much harder to use which impacted how often they use it.

Interest and success of use can often align to interests, not just requirements: One participant had only recently purchased a smart phone after resisting to buy one for several years, but reported finding it useful with several benefits including helping him to easily book travel, access sports news, and follow music news.

Participants felt some websites were easy to learn (e.g. search engines, shopping and booking websites). Others raised worries about getting things wrong e.g. online banking and formal applications. Participants appeared to value using technology for hobbies and interests rather than formal services.

- Application to interventions: Peoples interests can be a good way to demonstrate value - it can then be possible to communicate examples and design support around these interests. This may be more motivating than a service with no other options for engagement.

Emails caused some issues and people showed some hesitancy in using them: One participant expressed email to be hit and miss and with a want to 'crack it' as some email and booking formats worked really well (such as his doctors and dentist) but others were not clear or complicated.

Another participant was unable to resolve an issue with her emails: *"mostly stopped using emails as they now have so many pop-ups that won't close."*

Low interest in social media: social media was reported to be an unappealing space for several participants, where content was offensive or shallow. There was also some caution not to 'get pulled in' like they had seen others do.

- Application to interventions: A focus on the Horn Park Facebook and WhatsApp groups may exclude some or lose their interest.

Utilisation:

Some have pathways for support: One participant stated that they travelled to a phone shop in nearby Lewisham several times to solve issues and received quick support. This participant did not learn how to fix these issues by being there, but was satisfied with the support. This participant was focused on using this support whenever they needed some help, with less interest to use another local space for digital support even if it was local to Horn Park.

One participant mentioned Bromley Library as their go-to space when their laptop is not working as it has PCs, printers, and free broadband dongles.

- Application to interventions: There may be a reluctance from some to use current social spaces for learning or digital support, where this could 'crowd-out' the current positive perceptions and appeal of these social spaces. These wider support routes could be brought into the interventions.

Skills can move in different directions over time and due to key life changes: one participant came from a career that required a range of digital skills that they had felt adept at. *"If you spoke to me in 2012, I could tell you everything."* However, they had since lost some skills, and confidence, which had been exacerbated by other personal challenges and life changes. What was important for them was not to feel patronised, whilst it was a potential that with appealing support and motivation, they could quite quickly re-skill.

Some report being fine without digital access and have no interest to 'get online': this may need to be carefully considered for how genuine choice is offered to people, whilst ensuring they are well and can do what they need.

Concern of social impacts from digital and AI: A couple of participants had clear concerts about the loss of human jobs and in-person interaction by supporting digital, whilst AI was seen to magnify these concerns and raised questions of whether it should be supported at all. This AI concern could lead individuals to becoming disinterested overall in digital or to let their use and skills diminish.

Feedback on intervention ideas:

Some of the intervention outlines were also tested for feedback:

Feedback on the digital hub included:

- It can be assumed that people can't do things as they're older but this is often not the case or was not previously.
- Some may not want to use current spaces that mean something positive and are seen as being quite different to what good skills or learning space could be.
- A Hub here could be good for people, as they'll need to feel safe and have it local. Having nice trainers/ support people who do know the topics well is where the difference might be made.

Feedback on NHS focused support:

- There could be interest, especially if it helps shorten the time people spend in the facilities.
- On a community digital champions model – could be useful, but is where it is and what else is on offer for people. The enjoyment and quality of being people led will matter.

Summary

A summary of engagement and feedback on the digital inclusion interventions:

- The importance of local spaces to connect and relax were important to those we engaged. Attendees at St Mildreds were visiting to be with others, in typically informal ways. Without a clear space it will be difficult to deliver digital support.
- There is a need to understand reasons for low engagement, for example whether it is about a reluctance to engage with the council, or reflecting wider issues that people face, or from past experiences. This in turn can help design more effective future engagement forums.
- St Mildreds is a large, flexible, and engaging space that is developing an attached community space: so, it could offer a new opportunity to engage local interest and participation. However, those engaged felt to be far from Horn Park (if not geographically).
- Horn Park is at a specific point in time and this shapes the BSM process and outcomes - a wider approach beyond digital inclusion seems to matter e.g. health and wellbeing, community re-activation or new local spaces.
- It may be important to understand people's top concerns or keen interests, where this is unlikely to be digital. So, there may be a need to focus on this in intervention design, with digital as a supporting element.

Horn Park community engagement key findings:

- Residents may use other assets and organisations for digital support than those that were mapped for the neighbourhood.
- Care is needed for the design and introduction of digital support offers in existing local assets and venues that provide a valuable and appealing offer. Introducing digital support or skills could change the dynamic or perspective of the space, for example it could 'crowd-out' the value of the space for informal social connection.
- Interests and hobbies can be a key driver for positive use of digital tools and services - and can affect the motivation to learn skills. This is important for understanding behaviours, and can inform intervention design.

Intervention Blueprints

Core participants identified the following intervention concepts as a result of the workshop series. The blueprints were further refined through synthesis with spatial analysis and community engagement data:

Intervention 1: Community-Based Informal Digital Support Hub

Intervention 1 establishes a recurring, community-based digital support offer at St Mildred's Church, positioning it as a safe and inclusive space for older residents to access informal digital support and connect to other residents. The hub provides drop-in sessions where residents receive hands-on help using their own devices, alongside light-touch support to build confidence in engaging with existing online spaces such as the Horn Park Residents Facebook Group.

Intervention 1 deliberately integrates digital support within a broader social and community offer (e.g. coffee mornings) designed to help to reduce anxiety and reposition digital engagement as a normal, shared activity. It can also act as a central signposting point to other services (e.g. healthcare support, community activities), while testing and building awareness of St Mildred's as an open, inclusive space for all residents. Early engagement should include facilitated visits, for example through the Public Health Team's health walks. Insights gathered through the digital drop-ins could then be fed back to the Digital Inclusion Team to strengthen insights into real barriers around digital services among older people in the Horn Park neighbourhood.

Potential Delivery Model

- Royal Greenwich Public Health team co-delivers with St Mildred's Church and Community Engagers / Connector; supported by local partners such as Charlton Athletic Community Trust (CACT) where relevant. Initial promotion happens via the Public Health newsletter, local networks (including the local corner shop), and targeted outreach on digital channels like the Facebook and WhatsApp groups. Furthermore, the Public Health team will organise health walks to the church together with Community Engagers; with additional support mechanisms (e.g. assisted transport) to enable participation from residents with mobility constraints.

Target Behaviours

- Older residents attend local digital drop-ins at St Mildred's Church
- Older residents bring personal devices to these sessions and seek support with both essential and casual digital needs
- Online residents engage with online community spaces in a safe and supported way
- Older residents act on signposted opportunities and referrals

Beneficiaries

- Primary: Older residents in Horn Park
- Secondary: Community partners using the venue for outreach on local activities

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "St Mildred's Church hosts 'Warm Spaces' on Wednesdays" (Cluster 4: Community Hubs and Organisers)
- "Community Engagers help older people connect with local activities" (Cluster 4: Community Hubs and Organisers)
- "Older People unfamiliarity with social media dynamics" (Cluster 5: Information Flows and Signposting)

- "Local Corner Shop links up and signposts older people" (Cluster 5: Information Flows and Signposting)
- "RBG DI Team understand current barriers and design interventions" (Cluster 1: Understanding barriers and system coordination)

About the Readiness Score

The readiness score assesses the extent to which the intervention can be implemented:

1. Low readiness - No clear owner, design and development required, and early engagement necessary.

2. Moderate readiness - intervention is feasible and grounded in existing assets, but requires piloting, scalability testing and refinement.

3. High readiness - ready to be tested with target groups and refined where necessary, near implementation, with low barriers and low risk profile for implementation.

The readiness score is further defined in the methodology section.

Readiness Score

- 2 (Moderate Readiness)

Intervention 1 addresses core physical opportunity barriers identified in the mapping, particularly the lack of accessible, trusted physical spaces, while also supporting practical capability and motivation through a social, low-pressure engagement channel. By embedding digital support within a broader community offer, it reduces stigma and leverages peer influence, helping to counter shame and anxiety around digital skills. It also strengthens system coordination by creating a visible, shared access point for signposting and engagement, while building trust in a key local asset in St Mildred's. The inclusion of supported access to online community spaces further bridges offline and digital engagement, addressing the fragmentation in information flows.

Key risks include:

- St Mildred's has limited opening times, so this is reliant on establishing a partnership with the church first;
- St Mildred's is not currently not set up for digital support so good connectivity needs to be ensured and residents will have to provide their own devices;
- Resource and staffing constraints may affect consistency and sustainability of delivery;
- Risk of excluding residents with mobility issues unless transport or outreach support is actively provided; and,
- Potential to crowd out or disrupt existing uses and perceptions of St Mildred's if not carefully integrated.

Intervention 2: Local Digital Champions

Intervention 2 would establish a structured Digital Champions ("Champions") model to provide flexible, one-to-one digital support for older residents, delivered through trusted local Actors and settings. Champions offer tailored assistance across a range of needs; from basic device use to accessing online services and safely engaging with social media platforms, helping older residents to build confidence over time.

Support is delivered through a mix of in-person sessions (e.g. at St Mildred's or other emerging community spaces) and personalised channels (phone-based support as a minimum, ideally also home visits) to ensure accessibility for residents with mobility constraints. Access to support is designed to be inclusive, with multiple entry points (e.g. referrals via Community Engagers, promotion and sign-up options at community events like health walks) rather than relying solely on formal booking systems. The model is closely aligned with existing roles like the Community Engagers as well as the upcoming Community Connector role, with potential to upskill these Actors and embed digital support within wider community engagement activity.

Champions systematically collect insights from their direct engagement with residents and feed this back to the Digital Inclusion team to build the evidence base on barriers to accessing digital services for older people.

Potential Delivery Model

- Royal Greenwich Digital Inclusion team coordinates recruitment, training, and management of Champions; with delivery through Community Engagers, the upcoming Community Connector, and trained local volunteers. Access to this service is established via referrals, in-person sign-up at community venues like St Mildred's or the local corner shop, and simple offline booking routes.

Target Behaviours

- Older residents seek help when encountering digital problems;
- Digital Champions provide structured, trusted one-to-one support;
- Older residents build confidence in using digital tools and online spaces; and,
- Digital Champions collect information on digital access barriers and report these back to the DI team.

Beneficiaries

- Primary: Older residents needing personalised assistance.
- Secondary: DI team and community partners through expanding their delivery capacity and generating on-the-ground insights.

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People disengage" (Cluster 2: Accessing Services).
- "Community Engagers help older people connect with local activities" (Cluster 4: Community Hubs and Organisers).
- "Older People unfamiliarity with social media dynamics" (Cluster 5: Information Flows and Signposting).
- "RBG DI Team understands current barriers and design interventions" (Cluster 1: Understanding barriers and system coordination).

Readiness Score

- 2 (Moderate Readiness)

This intervention directly targets capability barriers through personalised, needs-led support, while leveraging trusted relationships to address motivational barriers such as fear, embarrassment, and lack of confidence. By embedding support within existing community roles and systematically integrating iterative engagement mechanisms, it also strengthens system coordination and insight-sharing; thereby enabling system Actors like the Royal Greenwich Digital Inclusion team to understand the scale of digital exclusion in Horn Park and, as a result, be more responsive to real needs of older people in the neighbourhood. The flexible delivery model helps mitigate access barriers, including mobility constraints, and provides an important bridge between informal engagement (e.g. hub drop-ins) and more sustained behaviour change.

Key risks include:

- Financial and coordination requirements for recruiting, training, and supporting Digital Champions (related to the need to appropriately incentivise existing roles like the Community Engagers);

- Risk of overlap or tension with existing community roles (e.g. the new Community Connector) if not clearly aligned;
- Trust barriers may limit uptake initially, particularly for sensitive tasks (e.g. online banking); and,
- Remote and personalised support via phone calls or home visits requires some baseline capability (if this is not available, there is a risk potentially excluding the most digitally excluded).

Intervention 3: NHS App and Digital Healthcare Support

Intervention 3 establishes targeted support to help older residents navigate digital healthcare systems, with a focus on the NHS App and related services (e.g. booking appointments or accessing prescriptions). While the primary space to deliver this support is planned to be The Source, delivery may need to be initially flexible while The Source undergoing re-development by Oxleas NHS Foundation Trust: piloting sessions could be hosted at other sites (e.g. St Mildred's Church or the Horn Park Primary School), facilitated by the Royal Greenwich Public Health team in partnership with local NHS Actors (e.g. NHS South East London ICB and Oxleas NHS Foundation Trust). Delivery would then eventually transition to The Source once renovations are completed.

The intervention is designed to align with residents' immediate health needs, using healthcare as a practical and relevant entry point into digital engagement. Delivery should be co-designed with residents and informed by further research into current Behaviours and barriers, ensuring the offer is accessible and relevant. Promotion is integrated into existing communication channels (e.g. the Public Health newsletter or social media groups), with clear links to wider support (e.g. Digital Champions, hub-based activity at St Mildred's).

Potential Delivery Model

- Royal Greenwich Public Health team partners with NHS Actors to deliver sessions; possible initial pilot delivery at St Mildred's or Horn Park Primary School, with transition to The Source when available. Promotion of any pilot activities and later the full programme is supported by Community Engagers / Connector and other existing information channels for outreach and referral.

Target Behaviours

- Older residents download and register for the NHS app.
- Older residents use digital healthcare services independently.
- Older residents (know where to) seek support when encountering difficulties with digital healthcare.

Beneficiaries

- Primary: Older residents experiencing difficulties with digital healthcare systems.
- Secondary: Local healthcare providers through reduced reliance on non-digital channels.

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People experience difficulty navigating digital healthcare systems" (Cluster 3: Healthcare).
- "Community Engagers help older people connect with local activities" (Cluster 4: Community Hubs and Organisers).

Readiness Score

- 1 (Low Readiness)

Intervention 3 targets a salient use case in the digital inclusion sphere – healthcare – where digital exclusion has immediate consequences, making it a potentially powerful engagement hook for older

residents in Horn Park. Intervention 3 builds practical capability while also addressing motivational barriers through relevance and perceived necessity of digital engagement and basic skill development. By leveraging NHS partners and aligning with existing policy priorities, it strengthens cross-system coordination and creates opportunities for sustainable delivery. A phased approach with initial pilots may help build early momentum until the physical space for delivery at The Source is fully set up and operational.

Key risks include:

- Uncertainty around The Source timeline and available resources may affect delivery;
- Risk of overburdening the Public Health team who is already filling a lot of important infrastructure gaps with their engagement in Horn Park;
- Healthcare focus requires careful design to make digital engagement appealing because it relates to sensitive and potentially anxiety-inducing contexts;
- Limited current insight into how residents engage with digital healthcare (which may require additional research upfront).

Reflections

Benefits - and learning

Greenwich participants reflected the following benefits from the trial:

- The delivery of the BSM method was well-paced and introduced new concepts effectively.
- The BSM method is seen to be effective for understanding digital inclusion challenges at a neighbourhood-level as it recognises a complex system with many interconnected parts, including the intersectionality of factors.
- BSM was seen to be a useful method for understanding Horn Park and its digital inclusion, especially highlighting the interplay of factors such as low engagement and lack of assets for the neighbourhood.
- The method is also useful for understanding behaviours and drivers, though incorporating more sources of information would make the analysis more comprehensive such as current use data and resident engagement.
- The trial also had a flexible delivery, and the map itself can continue to be added to and refined, which is particularly useful for a neighbourhood in a moment or horizon of change.
- BSM was seen to be helpful for thinking about potential interventions and determining where and how to support residents. However, this was severely limited by low engagement from different stakeholders and residents, though this was not attributed to the method itself.
- The method was seen to be a useful process with applications beyond the trial and could be well adopted for many other initiatives or 'system-level challenges', beyond digital inclusion.
- Participants also recognised the value of engaging in BSM as an exploratory space in which to think through interventions and solutions.
- Participants felt that the method strengthened shared understanding across stakeholders and enabled partners to see how the work of different Actors and teams connects. This helped them to identify barriers that would not be seen in quantitative analysis and gaps in data, and helped to prioritise where action was needed. The approach also enhanced collaboration with partners (e.g. St Mildred's Church).

The lead participant for Horn Park reported moderate confidence in using the method again. However, the importance of a neutral facilitator and neutrality in the between-workshop analysis and synthesis was recognised to be important to reduce bias.

Limitations - and recommended improvements

Greenwich participants reflected that there are several limitations to be mitigated for future BSM projects:

- The initial lack of familiarity with Horn Park made the execution challenging of the method, including knowing which stakeholders and assets to involve and how to best reach residents. However, the project enabled participants to familiarise themselves with the neighbourhood.
- The timescale of the funding and trial was a barrier to gathering more information and readying the team and neighbourhood for participation, to make it more effective.
  Spending more time establishing 'foundational work' and getting involved in the neighbourhood beforehand, especially in a place like Horn Park that lacks existing infrastructure, would have been very useful.
- The trail still left some uncertainty on the scale of digital exclusion; this is not something that the method can directly inform on unless adapted to that.
- For Horn Park, this uncertainty was specifically whether people are not using email by choice or due to lack of devices.
- Partners recognised that limited stakeholder and resident engagement meant that several perspectives were missing, which reduced the richness and representativeness of the final map. The lack of strong resident voice limited the richness of the project outputs.
- There is also a high dependency on pre-existing relationships where trust and connection, and also facilitation are needed. Positionality was also important to understand – for partners being within the system means it may be difficult to remain objective, making facilitation more important. Facilitation also required capacity and expertise.

Horn Park provided an important use case for trailing BSM, highlighting that the method is flexible to any system - including those like Horn Park where there are limited resources and assets, and low levels of participation. However, there is more benefit to be realised when more and more diverse stakeholders and individuals are involved and when the neighbourhood is relatively well understood in advance.

Upfront planning and testing of readiness is useful to determine suitability of BSM, and where adaptations are needed. In cases where there is little insight, there may be value in upfront insight gathering and stakeholder coordination. For example, the Horn Park case could have benefitted from upfront insights gathering on-the-ground, to identify unknowns and increase knowledge, and give more time to explore local organisations and relationships.

It is also useful to continue to reflect on the position of Actors in the systems. For example, important Actors and assets may also sit on the periphery (when thinking of neighbourhoods) so it is important to continue to reflect on their status.

Further, the Horn Park BSM also strongly demonstrates a wider finding that the BSM map output only reflects a snapshot in time such that it should be seen as a live and dynamic output that can be revisited for the changes in the local context, Actors, or Behaviours to be reflected.

Next steps

The Royal Greenwich digital inclusion team would like to continue deepening their understanding of Horn Park by organising a follow-up workshop or meetup with residents to validate the assumptions and potential interventions identified through the mapping process. The team will maintain close collaboration with the Horn Park Steering Group to identify further opportunities for engagement and ensure ongoing alignment with local priorities. As part of this exploration, Royal Greenwich is going to explore developing a pilot of digital drop-in sessions within the neighbourhood to test whether this type of offer meets resident needs and provides meaningful support. These steps will help refine insights, strengthen community involvement, and guide the development of more targeted and effective digital inclusion activities

Havelock Estate

Overview

The Havelock Estate (LSOA 029C) located in Southall, Ealing is a 21-hectare site built in the 1960s comprising 845 homes (481 council-tenanted, 364 leasehold/freehold). The total population is c.1,686, of which c.266 are aged over 60 years, across 4 Output Areas (OAs). Household composition is characterised by a high proportion of single-family households[31] - 57.8% and a lower proportion of one-person households - 25.4%. Key demographic information includes:

- 46.3% of residents were born in the UK/Ireland and more than half (53.7%) were born elsewhere. Most (91.4%) have lived in the UK for 5+ years with 8.6% living in the UK for less than 5 years.
- Just over half (54.7%) of all residents are of Asian, Asian British or Asian Welsh ethnicity, 22.2% are of Black, Black British, Black Welsh, Caribbean or African ethnicity, 8.9% are White and 14.2% are of mixed, multiple or other ethnic groups.
- 50.2% of the population is economically inactive but those who were in employment in 2021 (43%), typically travel to work by car/van - 42.1%, and 60.3% of all households own at least one car/van.
- Most people (69.6%) rent their homes, while 18.6% own outright and 11.8% own with a mortgage or shared ownership.
- In 2021, over three quarters (80.6%) of all residents reported being in good or very good health while the remaining were in fair (12.6%), bad (5.1%) or very bad health (1.7%).
- Fewer (13.5%) residents have a disability, which limits their day-to-day life a little or a lot. Provision of unpaid care is present within the neighbourhood, with 10.2% of all residents identifying as an unpaid carer.

Digital inclusion challenge

The Havelock Estate is a priority neighbourhood for Ealing Council. A significant proportion of the selected neighbourhood's housing stock is concentrated on Havelock Estate which is part of a paused regeneration programme. Previous engagement work by Ealing Council and third sector partners with the local community has highlighted feelings of isolation and of being left behind by the Council. There are also concerns among older people that the sense of community connection and cohesion which was once strong on the estate has been lost.

Income maximisation for older people was recognised as an important focus by Ealing Council through previous work with communities on the Havelock Estate. Current digital first pathways for income maximisation risk creating disconnection for people vulnerable to digital exclusion and potentially excluding them. BSM on Havelock Estate is therefore being undertaken to explore whether the method can generate new knowledge to support the development of initiatives that enable connection and inclusion, as well as inform local delivery of existing and potential future income maximisation activity. The trial on the Havelock Estate is intended to enable progress towards the following DSIT Digital Action Plan Priorities:

- B. Breaking down barriers to digital services
- D. Building confidence and supporting local delivery

[31] Defined by the census as a couple with/without children (dependent or non-dependent) or lone parent with children (dependent or non-dependent).

- E. Community engagement (e.g. how digital inclusion can strengthen social cohesion and community networks)

Strategic alignment

Ealing Council is currently developing a refreshed digital inclusion strategy which addresses the broad range of reasons for digital exclusion identified through early discovery work. Previous strategies have focussed predominantly on device distribution and skills training to digitally excluded people. While this is effective and appreciated by those who are digitally excluded due to lack of access to a digital device and low digital literacy, this approach does not serve the needs of those who experience digital exclusion despite access to digital devices and digital literacy skills. Ealing Council was therefore interested in exploring how BSM could support innovation, and potentially enable the development of a broader range of targeted interventions. It is hoped that knowledge generated will feed directly into the strategy development process.

Through the current Digital Inclusion Strategy Ealing Council is committed to supporting the neighbourhood over the long-term. Therefore, a key trial outcome was to ensure innovative approaches and insights gathered can directly benefit local communities in ongoing work or new programmes that may be developed in the future. Key to Ealing Councils approach is the need to ensure non-extractive research and engagement practice - and there was a desire through this trial to maintain this important principle.

Synthesis summary

The following sections present detailed analysis and insights of BSM and resulting intervention blueprints, as well as complimentary geospatial analysis and community engagement. Commonalities and differences between methods are explored in the Findings section.

This summary presents what emerged across these methods through the synthesis approach that is detailed in the methodology section above:

- **Digital exclusion in Havelock is sustained by a negative reinforcing cycle between service complexity and financial exclusion.** BSM shows that the digitisation of essential services creates pressure to engage, but complexity, low confidence, and fear of scams drive avoidance. Spatial evidence of income deprivation highlights how this compounds financial exclusion, as difficulties accessing digital financial services increase reliance on benefits that are themselves digitally mediated, further sustaining disengagement and limiting opportunities to build capability.
- **Informal, trust-based support networks underpin digital engagement but create structural limits to consistency and reach.** BSM and engagement both highlight strong reliance on friends, family, and known individuals, with trust enabling support-seeking. However, this creates a system where support is uneven and dependent on personal networks, limiting the ability to deliver consistent, scalable digital inclusion support across the neighbourhood.
- **Service design complexity drives disengagement as much as capability gaps.** BSM identifies disengagement not only as a result of low skills, but as a response to cumbersome, multi-step processes across services (e.g.

logging in, verification, navigation), leading to abandonment. Community engagement strongly reinforces this, with residents describing frustration and avoidance.

- **Skills exist but do not transfer across contexts.** Across BSM and engagement, residents demonstrate selective competence: they are able to perform familiar tasks but are unwilling or unable to extend these skills to new services or platforms. Spatial analysis supports capability as a key driver. Together, the three evidence streams highlight a nuanced system dynamic: confidence is fragile, and lack of transferability prevents progression into activities linked to income maximisation.
- **Local assets and coordination structures exist but are not fully aligned to how residents access support.** BSM positions the HAV as a central delivery asset but, alongside engagement, recognised that residents primarily rely on informal, peer-based and word-of-mouth pathways; this is further compounded by requirements for language-specific help. Spatial analysis added nuance: while several assets are within walking distance and others are well connected by bus, these may still be perceived as difficult to access, particularly for those with mobility constraints.

Behavioural Systems Map

System Objective

In Workshop 1, the core participant group jointly established the following system objective:

Our goal is to improve digital inclusion of older people on the Havelock Estate to support income maximisation. This will:

- Improve financial stability of older individuals
- Improve access to and benefit of using key digital tools (e.g. NHS App)
- Amplify voices and improve social and democratic participation
- Reduce the risk of fraud and scams, and Behaviours that may increase isolation

Overview

Mapping by stakeholders revealed that the digital inclusion system for older people on the Havelock Estate is characterised by a tension between the increasing move of essential digital services online (e.g. car parking services) and limited capability, confidence, and trust among older people. It was noted by workshop participants that as a result older people may avoid or disengage from using the internet, which in turn can exacerbate existing financial exclusion issues e.g. meaning people find themselves in debt due to unpaid bills.

Analysis of the resulting BSM illustrates that digital skills and device access form a central enabling pathway but appear limited by fragmented provision, limited resource capacity, and challenges in the context of skills transfer and retention. Mapping also highlighted that across the system, social norms and community dynamics appear to play a key role in strengthening the position of trusted local actors such as

The HAV which, alongside informal networks, is critical in enabling sustained engagement with digital services. Importantly, word-of-mouth was seen by mapping participants to act as a powerful amplifier of both positive and negative digital experiences of older residents.

Mapping highlights several key structural issues for the estate, including low levels of service coordination between Council teams and local third-sector networks and inconsistent communication channels (e.g. such as fragmented multi-channel handoffs and differing systems across services) which stakeholders noted may create bottlenecks in processes, limit communication efficiency, and lead to frustration due to their complexity and lack of clarity in messaging. Meanwhile, key institutional touchpoints, especially in the context of health services, are not fully leveraged due to behavioural and access barriers. Consequently, reviewing the system highlights good opportunities to strengthen trusted, community-based support organisations and groups, in addition to improving coordination between local third-sector organisations and key council services. The map highlighted a valuable peer-led pathway to building digital skills, which will utilise the work of third sector partners. Peer-led pathways are embedded on the Havelock Estate and are an important attribute of the map that could shift reinforcing loops from exclusion and disengagement towards sustained digital inclusion and financial outcomes.

The full Behavioural Systems Map is accessible on the project website.

Cluster Analysis

BSM revealed six clusters for the Havelock Estate digital inclusion system:

Cluster 1: Accessing Services

This cluster captures how the increasing digitisation of everyday and essential services creates pressure to engage and reinforces cycles of exclusion when engagement fails.

Stakeholder mapping revealed that older people on the Havelock Estate encounter digital touchpoints through many routine activities (e.g. cashless parking, paying bills, using smart appliances) - meaning digital engagement is often mandatory for everyday tasks. However, service design features such as multi-channel complexity or slow response times from council services interact with individual capability and motivational barriers, including low confidence, fear of fraud and cross-platform confusion. This then can lead to friction: driving avoidance behaviours, which in turn reduce opportunities to build familiarity and skills. Mapping participants recognised the danger of this for vulnerable older members of the community.

An important reinforcing loop in the context of income maximisation is that of compounding financial exclusion through digital exclusion: difficulties accessing financial services (e.g. paying utilities or council tax online) can contribute to financial strain or debt, increasing the need to apply for benefits - which are themselves accessed digitally - and thereby exacerbating exclusion.

In addition to this, behaviours mapped by stakeholders showed that negative social narratives and prior bad experiences amplify expectations of difficulty, further suppressing initial engagement. While there may be some latent motivation to engage with digital services and tools (e.g. the desire to avoid repeat negative experiences), this may be outweighed by emotional barriers and system complexity; pointing to a critical opportunity in simplifying service interactions and tackling perceived risk among older residents on the estate.

Cluster 2: Advice and Support

This cluster reveals a support system in which trusted, local actors enable engagement but are constrained by capacity and accessibility barriers.

Stakeholder mapping illustrated that support for older residents on the Havelock Estate is firmly anchored by trusted, place-based assets, particularly The HAV and the Havelock Community Shop; both of which play a crucial role in helping residents feel heard, validated and reassured. Participants reflected that their relational approach helps overcome trust and anxiety barriers and enables older people to share needs and seek help. The HAV's regular in-person offer and monthly advisor visits were seen to be especially important in supporting older residents with complex administrative tasks such as benefit applications.

It is, however, important to note that participants described through the mapping process a collection of formal support channels that are strained e.g. Ealing Council customer advisors are thought to often be overwhelmed by the number of requests; and, wider digital support provision (e.g. by Age UK or Ealing Council library services) is limited by staff capacity and budget constraints. Mapping stakeholders believed that this may create reliance on informal networks of family, friends, and neighbours, which can be effective but uneven in quality and accessibility. Physical distance to support hubs, combined with disabilities and other health conditions, further restricts access to in-person support; while language barriers shape both access to and effectiveness of support across the whole neighbourhood system.

Overall, this cluster reveals a tension between trusted community-based provision and systemic capacity limitations, suggesting that scaling trusted neighbourhood support systems through better coordination and peer models is a key opportunity.

Cluster 3: Health and Social Care

This cluster shows how health system interactions offer potential entry points for support but are currently constrained by access barriers and underutilised referral pathways.

Health and social care actors - particularly GPs and social prescribers - sit at an important but underleveraged junction in the system. Mapping stakeholders highlighted that social prescribers play a dual role on the Havelock Estate in both direct support and signposting, but their impact is limited by imperfect referral pathways via GPs.

Firstly, older people may struggle to access GP appointments due to digital exclusion issues (e.g. difficulty using the NHS app) or physical and mental health disabilities that prevent them from attending in-person appointments. Secondly, even when contact occurs, two key behavioural barriers were mapped that may limit disclosure of digital exclusion issues: individuals at GP appointments may feel too rushed or exposed to raise digital or financial issues, and there may also be a prevailing belief that 'social problems' are not appropriate to discuss with GPs. Together, these were thought by stakeholders to suppress the identification of digital and financial needs among older people on the estate and reduce referrals to social prescribers.

A disconnect in communication modes was also mapped which stakeholders believed created confusion and uneven engagement; for example, the continued reliance on letters in some cases versus the more general push by the health system toward digital tools like the NHS app. As a result, the system places disproportionate pressure on social prescribers to identify and respond to unmet needs. It may therefore be important to clarify roles in the healthcare system and enable more proactive identification of digital exclusion issues during healthcare interactions.

Cluster 4: Signposting, Information Flows and Awareness

This cluster describes a socially driven information ecosystem, where word-of-mouth is the dominant channel; creating both reinforcement effects and risks of further fragmentation.

The BSM process highlights that information on the Havelock Estate flows primarily through informal, social channels. Word-of-mouth was repeatedly identified as the most influential mechanism by which residents learn about services and decide whether or not to engage. This was believed to create a positive reinforcing cycle: when individuals receive effective support, they share their experiences, thereby increasing awareness and encouraging others to also seek help.

Furthermore, stakeholders highlighted that the HAV plays a central role in formal communication through multiple online and offline channels such as WhatsApp, letters, and leaflets. More broadly, the mapping process also identified a systemic lack of coordination and clarity between Ealing Council services and relevant VCSE organisations regarding 'who does what'. Mapping showed that this may lead to inconsistent or incorrect signposting that risks reducing the effectiveness of referrals and increasing user effort - and, as a result, frustration with digital systems.

Overall, mapping highlights that trust shapes behaviour: residents are more receptive to information that comes from familiar, community-based sources, particularly when language and cultural alignment are present. In contrast, it was also noted that some individuals may feel uncomfortable sharing needs in public neighbourhood settings that lack privacy (e.g. The HAV).

In summary, this cluster highlights an opportunity to amplify trusted social diffusion pathways while simultaneously improving coordination across more formal support provision.

Cluster 5: Training, Device Access and Connectivity

This cluster highlights that access to devices and effective, trusted skills development opportunities determine whether sustained digital engagement occurs.

Stakeholders in the mapping workshops recognised the importance of digital skills within the system, which here act as a linchpin: when required and maintained, they can reduce older people's struggles in accessing digital services and lower the likelihood of disengagement. This may, in turn, help older people avoid the aforementioned reinforcement of financial exclusion through digital exclusion. However, mapping participants noted that current provision of digital skills courses (primarily through Age UK and the Southall and the Dominion Centre Library) is again constrained by limited capacity and funding. In addition to this, courses tend to focus on specific tasks rather than transferable skills, limiting older residents' ability to generalise learning across different tools and platforms; this interacts with the key behavioural barriers of the difficulty transferring skills and retaining them without regular practice.

Furthermore, while libraries provide on-site access and Age UK offers a device loan scheme, mapping participants noted that many older residents lack consistent at-home access to a digital device, which restricts opportunities for practice and may exacerbate skills gaps. Many motivational and capability barriers were highlighted as limiting uptake of formal digital skills courses, including low trust in course providers, negative prior educational experiences, learning difficulties, and competing priorities in their day-to-day lives. Therefore, a notable opportunity lies in peer-to-peer learning: digitally included older residents supporting more digitally excluded others. This aligns with the reported strong preferences for trusted, relatable sources of support and may help overcome language and confidence barriers.

Spatial Analysis

About the Index and methodology

Analysis was conducted at the OA and LSOA levels at 2 layers:

Layer 1 (Quantitative) - aggregated national datasets including the 2021 Census and the Index of Multiple Deprivation (IMD).

Layer 2 (Contextual) - local information such as key assets and additional open-source datasets such as English proficiency.

Digital Exclusion Index proxy Indicators (layer 1):

Income deprivation (aged 66+), lives alone (aged 65+), broadband speed, long-term disability, digital propensity, adult skills, geographical barriers to services, EAL.

For more information, see the Methodology section.

Spatial analysis of key data sets for the Havelock Estate was undertaken concurrently to Behavioural System Mapping. Below we detail the key outputs of the process.

Digital Exclusion Index

Using our composite digital exclusion index most neighbourhoods in Ealing show low levels of exclusion; eleven LSOAs have been identified as a risk of digital exclusion for residents. The selected LSOA in Ealing has a low-moderate composite indicator score (Figure 11 Map A) and medium risk category (Figure 11 Map B). Analysis of the spatial data highlights that the risk of digital exclusion may be less severe here compared to other parts of the borough, however this may not align to the understanding or experience of residents or local stakeholders. This presents a useful case study in which to trial the BSM method to understand contextual nuances in the data - for example how spatial data does not include rich data on lived-experience, and limits understanding of the nature of the relationship between key factors that impact digital exclusion. The index includes indicators important to digital exclusion, but which do not directly describe data of older people. Instead, the index reflects broader neighbourhood-level digital exclusion risk within which older people are situated instead of a direct measure of older people's experiences. This limitation in the spatial data is recognised as an important attribute which qualitative insights through BSM may be able to tackle.

The Ageing in Place classification states that areas like the Havelock Estate typically have lower proportion of retirees, also shown in the 2021 census age distribution of the three largest age groups - aged 25-34 (14.8%), aged 35-49 (21.7%) and aged 50-64 (15.1%). Therefore, those in retirement, likely to be aged 66+, are a smaller proportion (around 11.9%) of the total population, meaning that the Havelock Estate may contain concentrations of digitally excluded older residents whose specific circumstances may not be reflected. Where possible neighbourhood-level analysis is added to provide a complementary perspective to enable synthesis of different data types. The three most common factors that could be driving digital exclusion at the neighbourhood level are bolded in Table 6 below.

Table 6: Index domains and their indicators

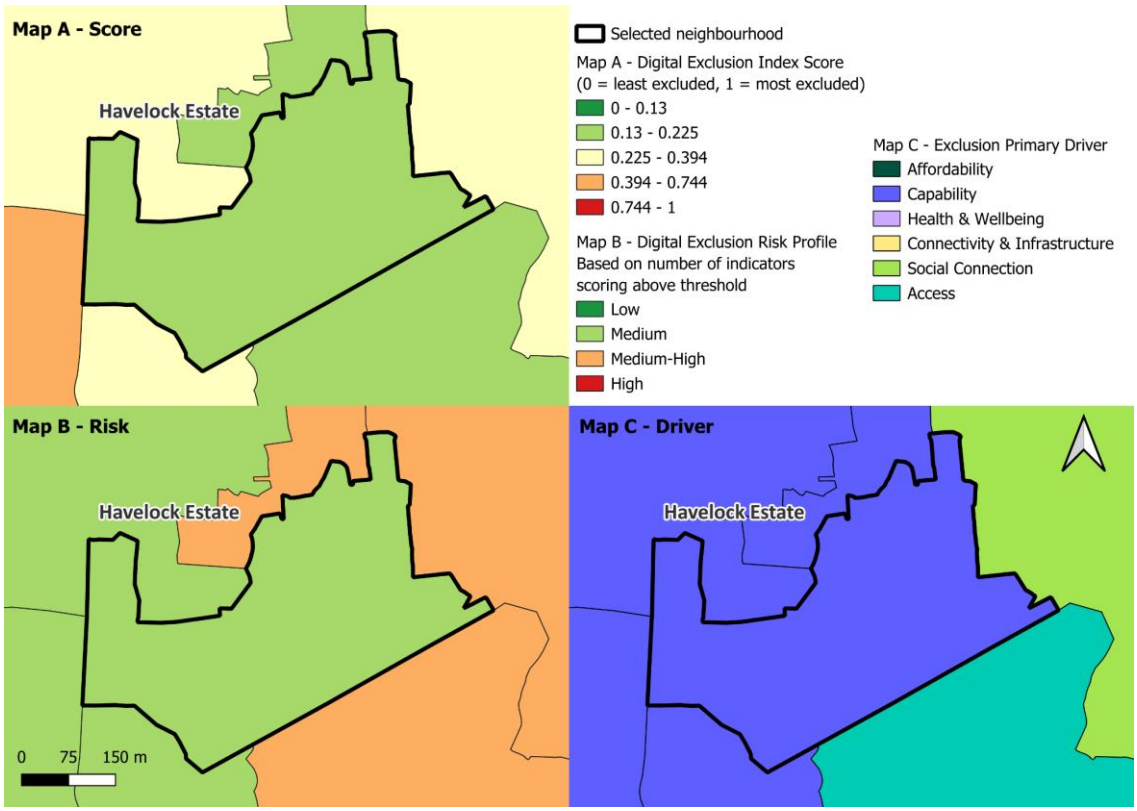
Domain	Indicator(s)
Affordability	**Income Deprivation Affecting Older People Index (IDAOPI)**
Capability	Digital Propensity Index (DPI)
	Adult Skills IMD sub-domain (literacy and maths skills)
Access	Geographical Barriers to Services sub-domain
	Proportion of one-person households aged 65 and over

Social connection	English as a Second Language (cannot speak and cannot speak well)
Health & wellbeing constraints	Disability prevents day-to-day activities a lot
Connectivity & infrastructure	Broadband coverage and performance (residential)
	Superfast broadband (SFBB) availability – 'UK Standard' or threshold for modern life

The Ageing in Place classification[32] for those aged 50+ categorises Havelock Estate as an area of "Multicultural Central Urban Living" and of "Peripheral Diverse Constrained Living". As confirmed by the census, this area has ethnically diverse groups, with higher-than-average proportions of residents both outside the UK and lower levels of English language proficiency. The primary driver analysis revealed that capability might be the main barrier to digital exclusion (Map C in Figure 11). The high presence of low education and training levels amongst residents is likely to be driving its high prominence – with the highest risk score of 0.99 (on a scale of 0 to 1). This may mean that residents may have low digital skills, which can make them digitally excluded. As the digital landscape is rapidly evolving, new digital systems, devices and tasks could be difficult for residents of the estate to use even if currently their overall digital exclusion and risk scores are low/medium relative to the rest of the borough. Resident engagement conducted by the Ealing team confirms that residents of the estate face confidence and language barriers and that their overall capability varies significantly depending on the task. Further detail is shared later.

Figure 11: Map outputs from the digital exclusion index

[32] Dolega, L., Dunning, R. and Nasuto, A. (2024). Classifying the Older Population - Understanding the Geography of Opportunities and Challenges in England. [online] Geographic Data Service, University of Liverpool, pp.1–105. Available at: https://data.geods.ac.uk/dataset/the-ageing-in-place-classification-aipc.



Residents in "Multicultural Central Urban Living" areas tend to live in rented accommodation, experience income deprivation and fuel poverty, and low employment levels. In relation to digital exclusion, they might be unable to afford a high-speed broadband contract, device costs, and other costs associated with being digitally included.

The deprivation census variable, mapped at the neighbourhood level in Figure 12, shows that between 30% and 42% of households in most of the Estate are deprived in one/two dimensions from either education, employment, health, or housing. The overall IMD score and the IMD score for older people, show that this estate is more deprived than 87% of neighbourhoods in England. In terms of income, it is more deprived than 93% of neighbourhoods in Ealing. As previously mentioned, for those aged 60+ deprivation is the second most common challenge in Havelock and those aged 50+ experience "constrained" living.

Figure 12: Different levels of deprivation in OAs in Havelock Estate

Neighbourhood assets

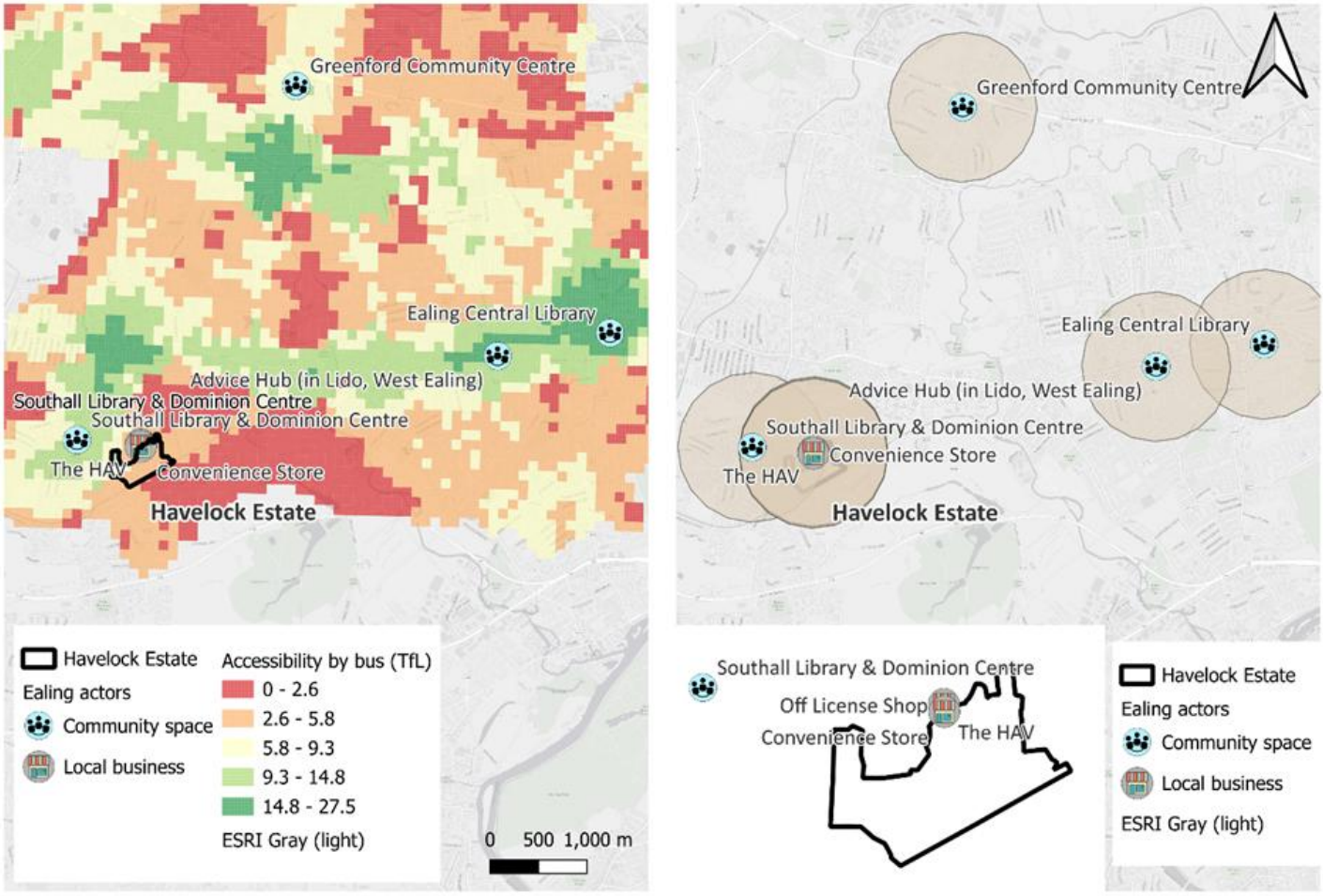
In Figure 13 below, Map A (left) shows public transport accessibility, using TfL's PTAL scores. The bus score was chosen for this analysis as older people are more likely to travel by bus.[33] This is overlaid by the key physical assets (some visible only in the closer map view) relevant to digital exclusion and older people living at the Havelock Estate. The geographically central location of the HAV and its high importance to the local community was highlighted in the resident engagement led by the Ealing Council team at the HAV. This includes five community spaces and two local businesses that have become integrated into the community by serving different functions e.g. signposting people to needed places. The map on the right overlays the actors with an 800m walking catchment as that was the second most common way of reaching places amongst older people according to TfL.

Alongside providing support and key services, it is important that these assets are accessible by older people (Figure 13 Map B), four of them are located within the estate or at a walking distance. However, two assets are located further away – Ealing Central Library and Greenford Community centre. These are both well connected to the bus network meaning that buses stop frequently and the walk to the bus stops is short. However, the Havelock estate has weaker connection to the bus network than the area where the physical assets (Ealing Central Library and Greenford Community Centre) are situated, which means residents may find it difficult to travel to these places. As a result, these Actors might be perceived as further

[33] Of Londoners aged 65+,63% use the bus at least once a week https://content.tfl.gov.uk/older-people-summary.pdf

away or 'not for them', potentially resulting in fewer residents from the estate making the journey to use them. As mentioned in the overview, 12% of residents have a disability which impacts their day-to-day life, this was also found to be significant in the overall digital exclusion index, hence accessibility to these services may be even more restricted to this group of people.

Figure 13: Accessibility by bus (Left) and by foot (Right) to key assets



Broadband connectivity

Residential broadband speed of <10 mbit/s was also mapped at the OA level to provide a more granular assessment of connectivity infrastructure on the Havelock Estate. This type of broadband supports only basic internet use on a single device, limiting simultaneous use by multiple devices and tasks (e.g. video calls). Packages that provide slower speed access tend to be more affordable, so given that financial barriers are prominent at the estate, residents may choose these slower broadband packages.

Within the Havelock Estate, residents experience varying connection levels, with more residents located to the west experiencing weaker broadband, some located to the north and none to the south. The output area classification by ESRC the OA where no residents experience weak broadband, is occupied predominantly by multi-child young families. They may be more likely to own multiple digital devices and do tasks requiring stronger broadband.

Overall, the spatial analysis suggests that when older people at the Havelock Estate experience digital exclusion, that is likely to be led by capability and affordability barriers. Adults' skills and training have been identified as the most significant barrier, followed by income deprivation affecting older people at a rate higher than that of most neighbourhoods in England, which suggests that the cost of devices, data and digital services may be challenging for this community. Lower English language proficiency across parts of the estate could also indicate difficulties in seeking and providing digital support. The infrastructure could also be a constraint to some, as three out of four Output Areas experiencing residential broadband speed below the 'modern life' threshold. For this neighbourhood, social connection did not emerge as a primary driver of digital exclusion, which was also found through the resident engagement.

Havelock Estate geospatial analysis key findings:

- **Nuanced risk profile:** While the estate shows a low-to-moderate overall risk of digital exclusion compared to the rest of the borough, this data likely masks the lived reality, particularly for older residents who face specific, localised barriers not fully captured by broad spatial metrics.
- **Capability and language as primary barriers:** The most significant driver of digital exclusion on the estate is a lack of capability, driven by low levels of education and training, alongside lower English language proficiency, making it difficult for residents to use digital systems or seek support.
- **High deprivation and affordability issues:** The area suffers from high levels of household deprivation (more deprived than 93% of Ealing in terms of income), meaning many older residents likely struggle with the costs associated with digital inclusion, such as purchasing devices or paying for broadband.
- **Inconsistent broadband infrastructure:** Affordability issues are compounded by poor infrastructure; residents in three out of the estate's four OAs rely on slow residential broadband (<10 mbit/s) that only supports basic tasks on a single device.
- **Transport barriers to key assets:** While some community assets are within walking distance, important hubs like Ealing Central Library and Greenford Community Centre are further away and require bus travel. Those with disabilities may struggle to access key assets.

Community engagement

Community engagement was undertaken by Ealing Council during the development of the BSM to gather important insights on lived-experience from residents of the Havelock Estate. This was considered fundamental to driving mapping of the local digital inclusion system.

Approach

Older residents living on the Havelock Estate, primarily from the Harmony Lodge sheltered housing unit were invited to a 2-hour workshop to share their lived-experience of using digital devices and services. The facilitated method utilised activities including:

- Storytelling with prompt cards - an image or story prompt was selected by participants and used to help participants describe a personal story, resulting in personal stories and emotional insights for neighbourhood narratives
- Everyday Interactions: digital routines storyboard exercise - participants created visual maps of real-life digital journeys.
- Hopes, motivations & outcomes: learning & benefits prompts - participants used post-its to explore aspirations, drivers, and desired outcomes.
- Barriers & support pathways: barriers selection and support mapping (income & help-seeking focus) - participants prioritised barriers and system maps showing gaps and pressures.

Sample

The sample consisted of:

- In total 7 participants engaged in the process, 6 from Harmony lodge, and 1 from another unit on the Havelock Estate.
- All participants were aged 65+. Six were aged 70 or over.
- Smartphones were the universal device used by all participants.
- More than two thirds of the group speak English as a second language.

Findings

Confidence as the primary barrier, not access: Participants' challenges were less about access to devices and more about confidence and fear of getting things wrong if they continued to click, open, download things they were unsure about. Anxiety about breaking devices, making mistakes, or navigating unfamiliar interfaces frequently prevented engagement, particularly when tasks involved typing, form-filling, or multi-step journeys like opening a text message, clicking on a link and navigating to an online page. For one participant, confidence wasn't absent, but it was situational and sometimes fragile. They struggled to use their smartphone to order food shopping but felt confident using a smart scanner in the supermarket as the experience felt easier and familiar. Implication: Digital services that focus solely on access or functionality risk overlooking the feelings and thinking patterns that shape behaviour.

Language as a compounding factor: All participants highlighted that for many older residents who speak English as a second language, digital engagement can feel stressful and restrictive. Difficulties with typing, spelling, and interpreting instructions often led to hesitation and reduced confidence. As a result, voice calls, dictation (with support), and in-person assistance were widely preferred. Similar challenges were also reflected by one participant who favoured more "traditional" forms of communication. Their limited

confidence with written digital tools reinforced a reliance on phone calls and face to face interaction. They described how digital communication can restrict social connections and opportunity to improve language skills, stating that "as long as I have legs, I will use them." Language and literacy barriers further intensified uncertainty and increased reliance on others for support. Implication: Language is not an isolated accessibility issue, it directly influences confidence, independence, and willingness to engage.

Reliance on informal support networks: Participants consistently relied on trusted individuals including children, friends, neighbours, or community members to help resolve digital challenges. Seeking help was shaped more by trust, familiarity and physical proximity rather than formal organisational pathways. Informal community knowledge sharing was common, such as warning others about suspicious messages or potential scams. Implication: These informal networks already function as a critical support infrastructure, however access to this support is uneven, meaning that those who are more socially isolated, newly arrived or less embedded in community networks may face heightened digital vulnerability.

Smartphones as universal but limited gateways: Although smartphones were used universally and frequently, participants' confidence and capability varied significantly depending on the task. Familiar activities such as messaging and media consumption felt easy and manageable, while tasks involving accounts e.g. household bills, medical appointments, online forms, links, or council services caused friction, uncertainty and avoidance. Implication: High frequency of phone use should not be mistaken for broad digital confidence or capability.

Fragmented digital pathways drive disengagement: Multi-step journeys such as receiving a text, clicking a link, navigating a website, or then being prompted to download an app often led to frustration, confusion, and in many cases abandonment when the steps feel unclear. In these instances of a digital route feeling "cumbersome" or confusing, participants reverted to phone calls or in-person visits, gradually losing confidence and trust in the digital channel. Implication: Each additional step in a digital journey increases the likelihood of disengagement particularly for users with lower confidence or limited digital experience.

Trust, scams, and financial anxiety: Strong avoidance behaviours were observed in relation to unfamiliar messages, calls, and financial interactions. While many of these concerns were shared as community or friends' experiences, they had a significant influence on participants' own decision making and engagement. These responses were ways people looked out for themselves, rather than signs of being uninterested or unaware. Implication: Trust needs to be actively designed into services. Reassurance, transparency, and guidance should be clear, visible, and timely, rather than assumed or buried in hard-to-find information.

Where to focus the most achievable Interventions: The findings show that improving digital inclusion for this group is not just about access, it is about building confidence. Small practical changes in how services are designed and delivered can make a real difference to how residents engage with digital systems and opportunities. To be more inclusive, services should focus on how they can:

- Keep tasks simple and easy to follow, so people can get things done without feeling confused or frustrated.
- Make language support visible, flexible, and optional, so users can engage confidently without hesitation or reliance on others.
- Reduce fragmented journeys and unnecessary handovers between channels, helping people complete tasks without dropping out.

- Treat trust and safety as central to design, so users feel reassured when using services that affect their finances and opportunities.
- Recognise the role of informal support networks, while designing systems that enable people to act independently rather than depend on others.
- Provide informal digital drop-in support to help residents build confidence with everyday digital tasks
- Meet residents where confidence is fragile by working with trusted informal networks to reduce fear around unfamiliar digital tasks – this could be peer to peer incentivised support like skill exchanges, vouchers or other beneficial rewards.

By prioritising confidence and clarity, rather than access alone, services can better support residents to engage with digital platforms, from applying for benefits, to managing finances, and accessing wider opportunities, to helping to maximise income and reduce both digital and social exclusion.

Reflections

The community engagement research undertaken did not find that participants are unable to use digital tools, nor that they personally experience every risk discussed. Instead, it highlights how confidence, language, trust, and service design come together to shape people's online behaviour even among those who are already digitally active but do not feel fully secure.

The value of these findings lies in showing where and why confidence breaks down, and in identifying how digital services can be designed to support sustained, independent engagement, rather than one-off task completion. By addressing these barriers, services can help people make better use of online opportunities, including checking entitlements, managing finances, and accessing wider support that contributes directly to income maximisation.

Contribution to the BSM exercise

Community engagement played a vital role in bringing resident perspectives into the mapping process which did not cater to resident voices. Community engagement added real value to the mapping and intervention design process. These benefits included:

- Validation of key actor-behaviour nodes and connections, introducing important context to assumed behaviours and connections - for example challenging the assumptions of mapping participants as to current use-rates of digital devices, key to several of the clusters described in which vulnerable older people could be assumed to be fully disconnected from digital services.
- Additional insights to support leverage point analysis and intervention design, providing further data on lived-reality for a limited sample of older people - highlighting where interventions could be better targeted. This is apparent for Intervention 3 which targets language barriers - and is validated by the community engagement outputs, resulting in a more detailed intervention blueprint.
- Supported critical review of the method, its benefits and drawbacks for the Ealing Council team, enabling deeper assessment of its capabilities and drawbacks. A key point here is recognition of the value of community engagement throughout the BSM process, and the potential for integration into workshop activities.

Community engagement also highlighted major limitations of mapping without direct participant voice. These include:

- Stakeholder views may be based on assumptions, and introduce significant risk of bias into the procedure. This is also apparent even in cases of trusted or expert stakeholders who may mis-represent or misunderstand the experiences of end users (e.g. partners with direct resident engagement experience).
- Key actor-behaviour nodes and connections may be embedded and drive intervention design before being validated and shaped with live experience. This introduces a risk of misalignment, inefficiency, and potential risks to inclusivity if interventions are designed without appropriate assurance. Expert stakeholders can support assurance, but may not be able to provide a full assessment without engagement with end-users.

Havelock Estate Community Engagement key findings:

- **Confidence as the primary barrier, not access:** Individuals' challenges were more about confidence and fear of getting things wrong.
- **Non-transferable skills:** A high-level of smartphone use exists for some residents, though this does not necessarily translate into confidence and motivation to use other digital means.
- **Fragmented multi-step digital journeys cause drop-off and distrust:** Day-in-the life story-telling identified the critical importance of service design
- **Social connection and language as compounding factors:** People consistently rely on trusted individuals and informal networks (e.g., children, friends, neighbours, community groups) to help resolve digital challenges. Seeking help was shaped more by trust, familiarity and physical proximity rather than formal organisational pathways.

Intervention Blueprints

Core workshop participants identified the following intervention concepts as a result of the workshop series, which were further developed through geospatial analysis and community engagement:

Intervention 1: Direct Access & Conversational Navigation to Local Support

Overview: Intervention 1 establishes a service coordination and navigation system that equips older residents with the knowledge, confidence, and practical skills to identify, access, and share accurate support information.

It encompasses structured guidance and the development of optional conversational or voice-assisted tools. Rather than traditional signposting, it focuses on teaching people how to ask questions, interpret responses, and locate relevant services independently; with the ultimate goal of strengthening self-efficacy and confidence in navigating digital and non-digital support pathways in the context of income maximisation.

Simultaneously, Ealing Council and VCSE partners collaboratively undertake service design work to map and simplify key support pathways, ensuring frontline staff, volunteers, and community champions are equipped with up-to-date, consistent information. Iterative engagement mechanisms are built in, allowing insights from residents' queries and challenges to inform ongoing service simplification and coordination, particularly for pathways linked to income maximisation and essential household administration.

In doing so, Intervention 1 addresses a key system bottleneck: fragmented and unreliable information flows, which currently limit effective help-seeking and contribute to disengagement. It targets psychological capability (knowing how and where to seek help), physical opportunity (clearer, more accessible pathways), and motivation (reducing effort and uncertainty in navigating services).

Potential Delivery Model

- The intervention is jointly delivered by Ealing Council (Digital Services / Customer Access Teams) and The HAV, with a focus on aligning system-level service design with on-the-ground support. Conversational tools (e.g. chatbot interfaces or voice-assisted search guidance) are introduced as optional enablers, supported in-person to ensure accessibility and build confidence.

Target Behaviours

- Older people directly search for and access appropriate digital support services
- Older people use conversational or verbal search functions to ask questions
- Older people share accurate information about where to seek help within their networks
- Council and VCSE partners share up-to-date and consistent information with residents on where to get support

Beneficiaries

- Primary: Older people seeking digital or related support
- Secondary: Formal and informal community networks that circulate and interpret information

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People seek support" (Cluster 1: Accessing Services)
- "Older People share information via word of mouth" (Cluster 4: Signposting, Information Flows and Awareness)

About the Readiness Score

The readiness score assesses the extent to which the intervention can be implemented:

1. Low readiness - No clear owner, design and development required, and early engagement necessary.

2. Moderate readiness - intervention is feasible and grounded in existing assets, but requires piloting, scalability testing and refinement.

3. High readiness - ready to be tested with target groups and refined where necessary, near implementation, with low barriers and low risk profile for implementation.

The readiness score is further defined in the methodology section.

Readiness Score

- 2 - Moderate Readiness

By strengthening the accuracy and visibility of information within existing word-of-mouth networks, the intervention leverages a dominant mechanism on the Havelock Estate, turning it into a more reliable channel for directing residents to support. The integration of service coordination ensures that improvements are not limited to user behaviour but also address upstream system inconsistencies. Aligning content with income maximisation pathways increases relevance to the system objective, while conversational tools offer an accessible entry point for those with low confidence or literacy barriers.

Key risks include:

- Risk that conversational tools (e.g. chatbots) are underused or mistrusted by older residents with low digital confidence, limiting impact without strong in-person support.

- Risk of distortion as information is shared through word-of-mouth channels, leading to unintended changes in the core message or misinformation; particularly problematic when originating from trusted community voices.
- Ongoing requirement to maintain accurate, up-to-date service information, which may be resource-intensive and difficult to coordinate across organisations.
- Dependence on staff availability, consistent support and effective coordination between Ealing Council services and VCSE actors, which is currently a known system weakness.

Intervention 2: Community Digital Practice & Peer Support Network

Overview: Intervention 2 establishes a structured, community-based 'digital support practice' that enables older residents to complete real digital tasks in a trusted, supervised environment, while progressively building independence and peer-to-peer support capacity over time. Delivered through a regular drop-in at the Havelock Community Shop (via The HAV staff), the intervention bridges the gap between initial skills acquisition and sustained digital use by embedding repeated, real-world practice. It is designed to evolve in phases from facilitated support toward peer-led engagement as capability and confidence grow.

Sessions are structured around task-based engagement, where residents bring real problems, they're facing (e.g. paying bills, completing forms), and are supported to solve them themselves rather than having tasks done for them. Facilitators provide reassurance and troubleshooting while maintaining a clear boundary to encourage active participation. Safeguarding protocols are embedded throughout, particularly for sensitive tasks (e.g. online banking).

Potential Delivery Model

The intervention is delivered as a recurring drop-in session (e.g. weekly) hosted by The HAV at the Havelock Community Shop, with light-touch facilitation from trained staff or partner organisations (e.g. Age UK, library services where appropriate).
Delivery is phased over time:

- Phase 1: Staff-led support, building trust, understanding common user needs, and identifying core skills gaps
- Phase 2: Introduction of light peer support roles, with informal identification of digitally excluded residents
- Phase 3: Supported peer-to-peer model, where emerging Digital Champions play a more active role, with ongoing oversight

Target Behaviours

- Older people attend supervised digital drop-in sessions
- Older people complete real administrative and everyday tasks online
- In later phases: digitally confident older people provide peer support to others
- In later phases: older people seek help from trained or recognised peers

Beneficiaries

- Primary: Older people with developing digital skills
- Secondary: Digital champions and informal networks receiving structured support

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People acquire digital skills" (Cluster 5: Training, Device Access and Connectivity)
- "Digitally Included Older People teach other older people digital skills" (Cluster 5: Training, Device Access and Connectivity)

Readiness Score

- 2 (Moderate Readiness)

This intervention addresses a critical gap identified in the system between initial skills acquisition and sustained use, targeting capability (through repeated, task-based practice), opportunity (through a consistent, local, trusted space), and motivation (through social reinforcement and confidence-building). By embedding support within The HAV – an existing, trusted community asset – it aligns with strong preferences for in-person support and leverages existing word-of-mouth dynamics to drive engagement.

It also creates a pathway toward peer-led diffusion, which can help overcome trust, language, and confidence barriers identified across the system. Beyond digital inclusion and income maximisation, the space provides a flexible platform for wider service engagement (e.g. health messaging, reducing isolation), strengthening its overall system value.

Key risks include:

- Potential for the space to become a 'problem-solving service' rather than a skills-building environment, leading to dependency rather than independence
- Risk of reinforcing incorrect Behaviours or misunderstandings if support is inconsistent or not adequately supervised
- Safeguarding challenges, particularly around sensitive financial or personal transactions, requiring clear protocols and boundaries
- Risk of perceived or actual extractive engagement if resident contributions (e.g. peer support) are not appropriately recognised or supported

Intervention 3: Culturally & Linguistically Responsive Access

Overview: Intervention 3 establishes a targeted, community-led language support offer designed to reduce language-related barriers to digital engagement among older residents, by integrating basic language support with practical digital task guidance in culturally familiar and trusted settings. The intervention builds on existing community networks to deliver bite-sized, accessible sessions aligned with key language groups on the estate.

Course content is task-oriented and contextual, focusing on enabling participants to understand and navigate common digital interactions (e.g. recognising key terms, following basic processes) rather than delivering formal language instruction; this ensures relevance to real-world needs while complementing wider digital inclusion efforts.

Delivery could initially focus on the most prominent non-English language groups on the estate, given the diversity of languages spoken by residents, with clear communication about scope to manage expectations. An equity assessment would be undertaken to ensure language support meets Ealing Council's inclusion and service quality requirements. Community members involved in delivery are supported (e.g. training, clear role boundaries) to avoid overburdening and ensure consistency. In addition

to this, care is taken to design the intervention in a way that is non-extractive and socially sensitive; in particular, avoiding the reinforcement of existing community tensions by ensuring inclusive outreach, transparency in selection of language groups, and appropriate recognition for contributors.

Potential Delivery Model

- Intervention 3 is delivered through The HAV in partnership with locally trusted community organisations and individuals representing target languages (e.g. Somali and Punjabi speakers). Sessions are run as informal, small-group or drop-in formats, co-facilitated by bilingual community members and supported by staff where needed.

Target Behaviours

- Non-English-speaking older people attend informal language / digital sessions
- Older people seek support from culturally aligned champions
- Older people attempt online tasks with reduced hesitation

Beneficiaries

- Primary: Older people facing language barriers
- Secondary: Community members who are currently over relied on for language support among their peers

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People language barriers" (Cluster 1: Accessing Services, Cluster 2: Advice and Support, Cluster 4: Signposting, Information Flows and Awareness)
- "Older People acquire digital skills" (Cluster 5: Training, Device Access and Connectivity)
- "Digitally Included Older People teach other older people digital skills" (Cluster 5: Training, Device Access and Connectivity)

Readiness Score

- 1 (Low Readiness)

Intervention 3 addresses language differences - a foundational capability barrier - that underpins multiple issues across the system, including accessing income maximisation services, engaging with support, and building digital skills. By embedding support within culturally familiar and trusted relationships, Intervention 3 also responds to motivational barriers linked to trust, confidence, and social identity, which were consistently highlighted across the map and during the workshops.

Intervention 3 also reduces pressure on a small number of bilingual individuals, who currently act as informal support channels for their peers, while improving consistency and reach. It also complements peer-to-peer approaches by increasing the representativeness and accessibility of Digital Champions. While targeted in scope, Intervention 3 has broader system value by enabling more equitable access to other services and support pathways, including those related to income maximisation.

Key risks include:

- Intervention can only practically support a subset of language groups, potentially leaving some residents underserved - this is a key risk to Ealing Council's equity focused approach.
- Intervention may produce adverse confidence or trust issues if translation is poor quality or limited (e.g. only partial website or content translation).

- Risk of exacerbating existing community tensions if certain groups are prioritised without clear, transparent rationale
- Potential for extractive dynamics if bilingual community members are over relied upon without adequate support, recognition, or boundaries
- This intervention does not directly build digital skills so its impact depends on integration with wider skills and support offers.

Reflections

Benefits - and learning

Ealing Council participants reflected that there were limited benefits from the BSM trial. However, some strengths of the trial and its approach were highlighted:

- The check-ins across the different area teams provided a good space to hear and see how the work could be progressed and how other partners were doing. The use of multiple reflective and learning spaces across the trial partners worked well.
- The openness and ability of the research team to adapt and change tasks as the trial continued was appreciated and worked well. For example, community engagement was taken up for careful design and delivery by the Ealing Council team to address their concerns - and the engagement insights then fed into the BSM and intervention outputs.
- The research team used a methodical approach and the delivery of workshop content was well done.
- Some connections were formed between stakeholders who were brought together for the BSM trial but have since found ways to work together beyond it.

A learning through the trial was the validation of existing knowledge and principles for working with communities to address inequalities - and demonstrating this in a new context. This included:

- The important role of a local asset at the heart of the community and estate e.g. The HAV.
- The importance of reflecting everyday touchpoints for the community, and inviting the right networks and services into a participatory approach and in local connection and communication.
- The importance of community connector roles to liaise with the community, understand the local context and connect interventions with the people they are intended to serve, and to recognise what does and does not work, translating community needs into action. A specific community connector was brought into the trial in a meaningful and valuable way and played a key role to ensure residents were then represented and included through the engagement activities.

Limitations - and recommended improvements

Ealing participants reflected that there are several deep limitations to the BSM approach and its application in this example, with a need for significant adaptation for it to be appropriate for similar uses.

They explained that this was predominantly due to the approach taken, which centred the BSM process on the opinions of a small number of system actors and built from this, rather than centring the BSM process on the opinions of residents who experience digital exclusion and then building from this. They explained that the risks of the approach were twofold. Firstly, introduction of an unwanted bias at the outset of the work; biased towards the opinions of non-resident system actors. Secondly, low validity interventions as

they were developed based on the bias introduced. For these reasons, they felt that the approach did not model best practice in relation to inequalities reduction and created a conflict with the approach to participatory research they have been undertaking over the past 2 years, which is in part enabled through generous funding from NIHR. They shared examples of BSM training, or local BSM exercises they had been involved in, which they felt did model best practice in relation to inequalities reduction and confirmed that they did find considerable benefit from these.

Ealing Council workshop participants had a clear prior understanding of how digital exclusion can drive a range of inequalities. Ealing Council also seeks to embed best practices for reducing inequalities across the work they do. As such, the trial's approach - in not centring the community and resident voice nor following co-production or community-led practices - was not aligned to Ealing Council's wider objectives.

The Ealing trial approach reinforced the understanding that talking on behalf of those directly experiencing issues is a driver for the persistence of inequalities. Participants reflected that the approach of bringing professional and non-community member views to the fore first, and then validating them, is biased and ineffective for addressing inequalities.

The key limitations for Ealing and its use for the Havelock estate were:

- Not including residents or trusted networks of residents as core actors from the start of the work. This limited the effectiveness of mapping as it meant key actors were missing and this reduced the understanding and interpretation of the system. It was proposed that residents should be central throughout the entire process to shift power dynamics and ensure the work is not "done to" them.

  Resident engagement was later undertaken around workshop 2 as a trial and then more detailed engagement around workshop 3. However, it was felt that the approach had already embedded bias such that engagement was able to help validate some of the assumptions, but it did not enable residents to fully define what was important to them, to identify and prioritise the actors themselves, or shape the BSM.

  Ealing Participants suggested alternative and more innovative ways of including residents such as:

  - Their co-design of the sessions including the format, hosting, and size of the workshops and through self-organising on the estate.
  - Accessible ways for residents to drop-in to participate as much or as little as they want, in familiar and trusted spaces and at daily touch-points (reducing time burden).
  - The ability for residents to gain their own learning of the tools themselves.
  - For residents to be able to continue to directly input into the map through different methods.
  - The map itself could have benefitted from being a physical item in the space, where people could move about and add to it - making it more visual and interactive.
  - Ultimately, capacity building within the community, facilitated by community members, to make the work more sustainable.

  These adaptations may have been challenging for the scope and timescale of the trial. However, clearer upfront expectations and more planning time could have enabled the method to be adapted and more aligned with Ealing Council's objectives.

- A lack of learning and meeting of expected learning outcomes. The Ealing participants were keen to learn new techniques but found the trial approach meant the processes and analysis between workshops was not always clear, meaning it felt quite abstract in later workshops and would

therefore be hard to replicate. The team would have been glad to take a more co-production and hands-on approach here (and necessarily with residents' involvement too). There is also interest for more learning and capacity building on the BSM synthesis, to understand it better and assess whether it could be a useful method for other applications. It was suggested that capacity building throughout the trial would also have been useful, as time allowed. Further, Ealing did not gain new insights on digital inclusion or the neighbourhood through the BSM itself.

- An over-emphasis on the complexity and size of the map, where this would have been usefully accompanied with clearer articulation of how elements of the map drive change. It was felt that the complexity of the final map would need extensive explanation to others, limiting its usability or replicability.

The Ealing participants reported that they could see that a more participatory route for the BSM method could be valuable. The scope of this trial did not explicitly include and detail the role of resident engagement as part of the method which would have required a significant adaptation to methods trialled in other domains, reducing feasibility within the required trial timeline and resources available. Instead, the focus on community expert perspectives was emphasised - to deliver a trial approach and test the extent to which community partners can coalesce around a novel method of system mapping.

However, this use case does still provide value by helping to demonstrate a clear need for the resident voice to be included for the digital inclusion theme - and in Ealing's case to be centred through a participatory approach that is community-led. This would have required an alternative co-design approach from the outset to reinterpret the trial approach to meet the defined system objective and align to Ealing's wider objectives, which unfortunately did not occur in the trial.

It is important that these limitations and critiques of the approach are reflected upon. This can identify where and when the approach is not suitable, or to identify where there are readiness and ability to apply it in a community-led, co-production, and/ or participatory manner with community members.

Next steps

The Ealing Council team do not expect to use this BSM approach again. However, there would be value in having guidance on how to use BSM for identifying interventions based on lived experience, with examples of how the tool has been used and met clear research objectives.

Waltham

Overview

Waltham is a village and civil parish of approximately 6,000 people in North East Lincolnshire. The village is located close to the larger town of Grimsby, and has a rich rural heritage and active community. North East Lincolnshire Council (NELC) selected LSOA 023A in Waltham, which is home to 1,137 residents, out of which 608 are female and 529 are male, across 5 Output Areas (OAs). The area has an older age profile, residents are almost exclusively born and have lived in the UK, and the number of non-English speaking people is very low. Household composition is characterised by a high proportion of one-person households (46%) which is also true for those aged 66+. Key demographic information includes:

- **Travel to work:** Those who are in employment, typically travel to work by car/van - 73.7%, and 69.8% of all households own at least one car/van, reflecting Waltham's rural nature.
- **Home ownership:** Just under a third (30.9%) own their homes outright, 24.1% own with a mortgage or shared ownership, 28.8% socially rent while 16.2% privately rent their homes.
- **Health:** In 2021, three quarters (70.2%) of all residents were in good or very good health while the remaining were in fair (19%), bad (7.8%) or very bad health (3%).
- **Disability/care:** Just under three-in-ten (28%) of all residents are disabled, which limits their day-to-day life a little or a lot. Provision of unpaid care is present within the neighbourhood, with 10.7% of all residents identifying as an unpaid carer.
- **Deprivation:** 35.9% of households are deprived in one dimension, 23.2% in two, 3.6% in three or more.

Digital inclusion challenge

The selected neighbourhood has a low digital propensity score compared to other areas in North East Lincolnshire, indicating that residents are significantly less likely to engage with digital services. Demographics highlight an ageing population: 35% of residents aged 65 or over (402 out of 1,137 people), higher than the national average. Additionally, 39.3% of adults are retired, up from 22.6% in 2011, highlighting a rapidly ageing community. A high proportion of one-person households among those aged 66+ further increases the risk of social isolation and digital exclusion.

NELC selected this neighbourhood for the study with the purpose of better understanding the barriers to digital inclusion for the older community - which may include digital skills, low confidence, access to devices, connectivity, and unwillingness to get online. NELC's rationale also included the following which were captured by previous engagement:

- Potential affordability barriers to internet access meaning devices and internet connections may be limited; and,
- Offline choice preference for older people, who prefer non-digital methods.

NELC undertook this trial to support cross-team learning from a neighbourhood-focused approach which could be used to inform future delivery across other areas of the local authority, supporting a more inclusive and responsive digital strategy while enhancing the organisation's toolkit in terms of user centred design approaches. This study supports progress against the following DSIT Digital Action Plan Priorities:

- B. Breaking down barriers to digital services

Strategic alignment

NELC applied this work as part of the Digitally Smart theme of the Council Plan. The trial supported the plan by focusing on a neighbourhood with demonstrable need and opportunity for measurable impact,

supporting work to target resources where impact and outcomes are most likely. The approach aligns with the Council's current and broader Digital Inclusion activity, which aims to reduce inequalities in digital access and capability across North East Lincolnshire.

Synthesis summary

The following sections present detailed analysis and insights of BSM and resulting intervention blueprints, as well as complimentary geospatial analysis and community engagement. Commonalities and differences between methods are explored in the Findings section.

This summary presents what emerged across these methods through the synthesis approach that is detailed in the methodology section above:

- **Digital exclusion in Waltham is driven by the combined effect of living alone, financial pressure, and lower digital propensity among older residents, rather than a single dominant barrier**. Spatial analysis identifies these as the three strongest risk factors, while BSM shows a support system that is fragmented and unable to consistently respond to this combination of needs. Together, this creates a system where residents face multiple, reinforcing challenges, which requires coordinated support offers that reflect different levels of confidence, access to help, and financial circumstances.
- **Social connection is central to the system: it shapes who gets support, how support is delivered, and what digital inclusion can achieve.** BSM shows that family, friends, and trusted local organisations are often the gateway into digital support, but this leaves people living alone at a disadvantage. Spatial analysis reinforces this by identifying social connection as the strongest area-level barrier, while engagement shows it is also a co-benefit and delivery route for support, particularly through familiar, trusted settings and shared interests.
- **Waltham has trusted and accessible local assets, but they are not yet supported to operate as a fully visible or coordinated support infrastructure.** BSM positions Waltham Library and Friendship@Home as key entry points, and engagement strongly validates the library as a trusted, central asset. However, Waltham Library is constrained by limited capacity, visibility, and wider system coordination, meaning that existing provision, while valued and effective, cannot yet function as a clearly understood or consistently accessible pathway for digital support.
- **Current support patterns reveal a tension between solving immediate problems and building longer-term digital skills.** Across both BSM and engagement, some residents appear to prefer having a problem resolved for them rather than learning to do it themselves, especially when confidence is low or the task feels risky. This helps explain why ad hoc, task-based support is attractive, but it also limits skills development and suggests that interventions will need to balance immediate troubleshooting with gradual, confidence-building learning.
- **Awareness and motivation depend on how support is communicated: generic 'getting online' messages may be less effective than practical,**

topic-based engagement routes. BSM and community engagement both suggest that digital support is more compelling when tied to concrete needs or interests (such as health, transport, hobbies, or staying connected) rather than framed abstractly as digital skills. Newsletters stand out as accessible communication channels, but the wider evidence points to a lack of coordinated messaging and promotion, which reduces awareness of existing offers and limits uptake.

Behavioural Systems Map

System Objective

In Workshop 1, the core participant group jointly established the following system objective:

Our goal is to enable older residents in Waltham to build digital skills and confidence at their own pace by ensuring digital learning and connection opportunities exist alongside non-digital ones and providing the means and skills to use digital tools safely and in ways that genuinely enhance their daily lives; e.g. by decreasing social isolation of single households.
This requires:

- Challenging the assumption that this community does not require support;
- Understanding the current state of digital accessibility and activity (who is or is not digitally active & why);
- Bringing relevant, local organisations together to understand the needs and barriers of this cohort; and,
- Providing targeted and trusted support that enables and encourages individual choice.

Overview

Overall, the neighbourhood digital inclusion system in Waltham is characterised by a misalignment between increasing digital support demand and a locally fragmented, capacity-constrained support offer. A strength of the system is the presence of trusted community assets with clear potential to play a stronger, more coordinated role in supporting people over 65.

Organisations such as Friendship@Home and Waltham Library represent important entry points into the system, offering trusted, place-based support. However, their current reach is limited by capacity, visibility, the absence of a formalised support and skills development infrastructure. Informal pathways - particularly through family and friends - are critical but unevenly distributed, which reinforces inequalities for those who are more socially isolated.

Current information flows rely heavily on accessible but limited channels, such as two local newsletters, which provide a strong foundation to build on. Mapping revealed a need to improve coordination to consistently connect residents with up-to-date information on available resources. Similarly, while access to devices and connectivity is increasingly being addressed through local provision, the lack of structured, scalable digital skills pathways reinforces preferences for ad hoc, task-based support.

Taken together, this represents a set of reinforcing challenges with clear opportunities - limited coordination and reduced opportunities for skills development, but space to strengthen connections between local Actors, build trusted community assets, and a shift from reactive support to more preventative, skills-based approaches. This could enable more sustained digital engagement and, as a result, greater social connectedness and inclusion.

The full Behavioural Systems Map is accessible on the project website.

Cluster analysis

BSM revealed six clusters for the Waltham neighbourhood digital inclusion system:

Cluster 1: Digital-by-Default Systems / Council Services

This cluster focuses on the shift to digital-by-default services. This is characterised by both a lack of coordinated focus on digital inclusion support and limited knowledge of what effective support should entail.

Mapping revealed that across council, healthcare, and other essential services, digitalisation is being driven by cost-efficiency and policy direction. However, this is happening without sufficient coordination or shared ownership regarding digital inclusion support. As a result, the system is characterised by inconsistent user journeys (e.g. different online booking systems across GP practices) and unclear responsibilities regarding digital support needs of older people (e.g. between Council, DWP and the NHS or local ICB). Within NELC, these challenges reflect the fact that, until recently, digital inclusion had not been approached as a coordinated, council-wide priority. While there is good practice in research, service design and transformation, this has not always been applied consistently through a user-centred, inequality-focused lens across all projects. The absence of clear ownership of the digital inclusion agenda has limited the council's ability to bring digital inclusion to the forefront of service and solution design. As a result, some groups — including older people — are experiencing heightened exclusion from those services with a digital front door.

This produces a reinforcing dynamic: as more services move online, demand for support increases, but the system lacks the insight, coordination, and resources to respond effectively; an example of which is the single, overstretched phone line serving a local Medical Centre and two other practices. For older residents, this manifests as confusion, low trust, and difficulty keeping up with evolving systems such as the NHS app. A key issue appears to be the absence of a clear iterative engagement mechanisms connecting user experience and service design, limiting the system's ability to identify, understand and ultimately adapt to real digital barriers in capability and confidence.

Cluster 2: Accessing Digital Services

This cluster reflects the point of interaction between older people and digital systems, where capability, trust, and social context determine whether older people engage with digital tools and services.

Older people's engagement with digital services is shaped by a combination of fear, limited foundational knowledge regarding devices or technical jargon, and strong habitual reliance on or even an expectation of in-person alternatives. Even where access is technically possible, fear of scams, uncertainty about which communication apps or tools are safe to use, and difficulty navigating evolving systems are psychological barriers that lead to struggles and, in the absence of readily available and accessible support, can result in disengagement.

Social networks play a pivotal but uneven role; those with access to family and friends can bypass capability gaps through informal support, while those without remain excluded. This may reinforce existing

social isolation of one-person households, the mitigation of which was highlighted explicitly in the objectives. On the other hand, it is also important to note that reliance on others may result in tasks being completed on behalf of individuals, thereby limiting skill development and reinforcing dependency.

A key insight from the workshops centres on narratives and peer stories as powerful social signals, either amplifying fears (specifically around scams) or encouraging uptake. These social signals play a crucial role in the negative reinforcing cycle of low trust in or fear of digital tools and services, avoidance, and a resulting lack of practice or skills acquisition.

Cluster 3: Signposting and Information Flows

This cluster illustrates signposting and referral systems, as well as how awareness of digital support spreads within the community; with limited and fragmented communication channels constraining engagement.

Information about digital support is heavily reliant on a small number of accessible channels, particularly the physical newsletters from Waltham Parish Council and North East Lincolnshire Council. It was noted that these are effective in reaching less mobile or offline residents, but current gaps in coordination – such as incomplete distribution lists, missed deadlines, and limited cross-organisational visibility – reduce their overall effectiveness.

Digital channels (e.g. social media posts from NELC, Waltham Parish Council or a local VCSE helpline's online database on wellbeing activities) will likely not reach the most digitally excluded older residents, while physical materials (e.g. recently posted posters from Friendship@Home) have limited reach. As a result, many older people remain unaware or unclear about available support or help acquiring devices, SIM cards, or training.

Finally, competition for funding between VCSEs and limited knowledge sharing regarding who does what were noted as Drivers that further inhibit effective information sharing, signposting, and referrals.

Cluster 4: Receiving Support

This cluster represents local provision of support for older people struggling to access digital systems.

There are clear intent and commitment among local organisations to support older residents, with trusted Actors such as Friendship@Home and Waltham Library playing central roles. However, provision is largely informal, capacity-constrained and insufficient to meet demand. For example, the absence of a designated digital support hub and limited opening hours of the library were highlighted as key barriers restricting consistent access to digital support. A notable exception is the weekly digital drop-in session Friendship@Home has recently started to host at All Saints Church.

It was also noted that support is often reactive and task-focused (e.g. ad-hoc form filling), which helps address immediate needs but does not build long-term capability among digitally excluded older residents. Eligibility criteria and mobility constraints further limit who can access in-person support, leaving some of the most vulnerable underserved in the current system. Again, Friendship@Home presents a notable exception due to their ability to visit older people in their homes.

Following on from Cluster 3, limited coordination between community organisations and inconsistent referral pathways may lead to community services being underutilised despite their high potential. Overall, a key challenge appears to be converting the intrinsic desire among local organisations to help digitally excluded older people into a scalable and accessible support model.

Cluster 5: Acquiring Digital Skills

This cluster captures pathways to acquiring digital skills, including device access and connectivity, with a particular focus on psychological barriers for older people.

While there are multiple access points for devices and connectivity (e.g. free computers & Wi-Fi at Waltham Library, tablet loaning scheme by Friendship@Home, and free SIM card provision for households in data poverty at Centre4 and other NEL providers), mapping revealed no structured local pathway for developing digital skills. Skills acquisition is largely dependent on informal, 1-to-1 support provided by Friendship@Home or friends and family members; where the former is resource-intensive and difficult to scale, and the latter is not equally available to all older people.

This renders motivational and emotional barriers affecting independent learning - such as fear of breaking devices, concerns about online safety, or a perceived lack of benefits of owning a device or using digital tools - particularly salient. This is compounded by the fact that, even when initial access is achieved, the lack of opportunity to practise at home limits skill retention and progression.

A critical behavioural pattern in this context is the preference for immediate problem-solving over building general digital skills: together with the aforementioned psychological barriers, this further limits Behaviours that enable older people to independently solve digital problems (e.g. via watching videos on how to access digital services or use tools or devices) or acquire long-term skills.

Cluster 6: Social Connection

This cluster represents both a key motivation for digital engagement and an outcome of successful digital inclusion, linking digital capability to broader wellbeing.

Social connection is recognised as a primary Driver for digital engagement among older people in Waltham - particularly due to the high levels of people who moved to Waltham after retiring and the resulting geographic dispersion of their family networks. Existing opportunities for in-person connection are limited, may require digital skills to engage with (e.g. Waltham Parish online events calendar), and many older residents face mobility or health constraints that restrict participation.

Consequently, digital tools have a high potential to bridge this gap, enabling connections with family members and friends, access to local activities or participation in online social groups such as those organised by Friendship@Home. However, while initiatives exist, they are limited in number and nevertheless risk excluding those who lack foundational digital skills or do not own devices at all.

It is worth recognising the potential for a reinforcing behavioural loop here; increased digital skills and access may enhance social connection, which can in turn motivate further engagement and learning.

About the Index and methodology

Analysis was conducted at the OA and LSOA levels at 2 layers:

Layer 1 (Quantitative) - aggregated national datasets including the 2021 Census and the Index of Multiple Deprivation (IMD).

Layer 2 (Contextual) - local information such as key assets and additional open-source datasets such as English proficiency.

Digital Exclusion Index Proxy Indicators (layer 1):

Income deprivation (aged 66+), lives alone (aged 65+), broadband speed, long-term disability, digital propensity, adult skills, geographical barriers to services, EAL.

For more information, see the methodology section.

Geospatial analysis

Digital Exclusion Index

Spatial analysis using our composite digital exclusion index shows that the majority of neighbourhoods in NELC show low levels of digital exclusion; three LSOAs have been identified at a risk of residents living in them being digitally excluded.

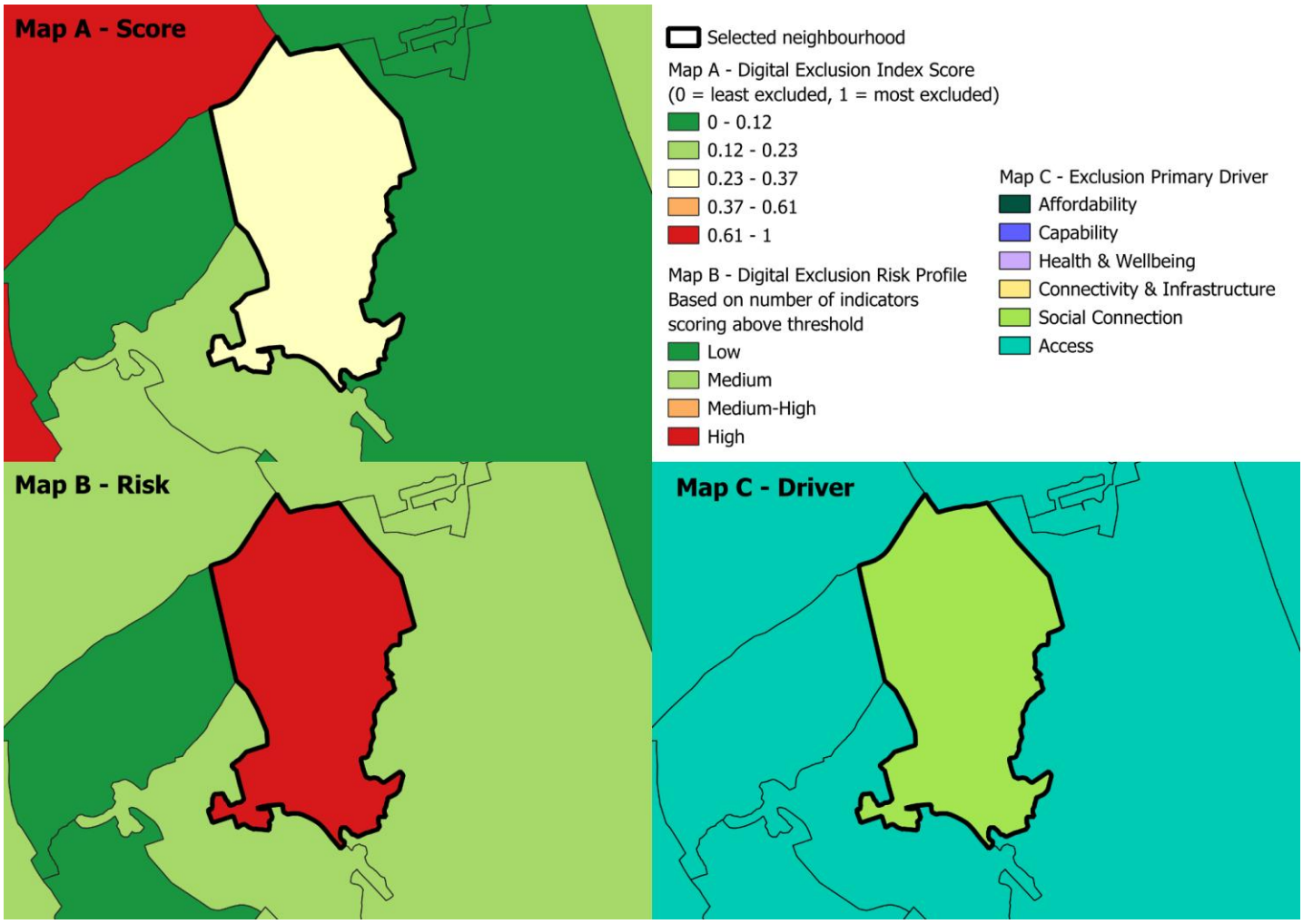
The selected LSOA has a moderate composite indicator score (Figure 14 Map A) but high-risk category (Figure 14 Map B). This means that digital exclusion is wide: residents face multiple overlapping barriers simultaneously, but no single barrier is severe. Therefore, residents may be at risk of consistent digital exclusion because of an accumulation of multiple moderately rated barriers. The three most common factors that could be driving digital exclusion in the LSOA are bolded in Table 7 below.

Table 7: Index domains and their indicators

Domain	Indicator(s)
Affordability	**Income Deprivation Affecting Older People Index (IDAOPI)**
Capability	**Digital Propensity Index (DPI)**
	Adult Skills IMD sub-domain (literacy and maths skills)
Access	Geographical Barriers to Services sub-domain
Social connection	**Proportion of one-person households aged 65 and over**
	English as a Second Language (cannot speak and cannot speak well)
Health & wellbeing constraints	Disability prevents day-to-day activities a lot
Connectivity & infrastructure	Broadband coverage and performance (residential)
	Superfast broadband (SFBB) availability – 'UK Standard' or threshold for modern life

The lack of one specific barrier means that one targeted intervention might not be appropriate. Residents are likely to benefit from a combination of coordinated interventions across multiple domains. This makes the case for a more systemic approach to understanding digital exclusion of older people in Waltham. Analysis across the index revealed that social connection might be the main barrier to digital exclusion (Map C). The high concentration of older residents living alone is likely to be driving its high prominence: with the highest risk score of 0.97 (on a scale of 0 to 1). This may mean that nearly all older residents in Waltham may not have access to immediate, at-home support for when they face a digital challenge. This could increase the overall risk for residents in the area of being digitally excluded.

Figure 14: Map outputs from the digital exclusion index

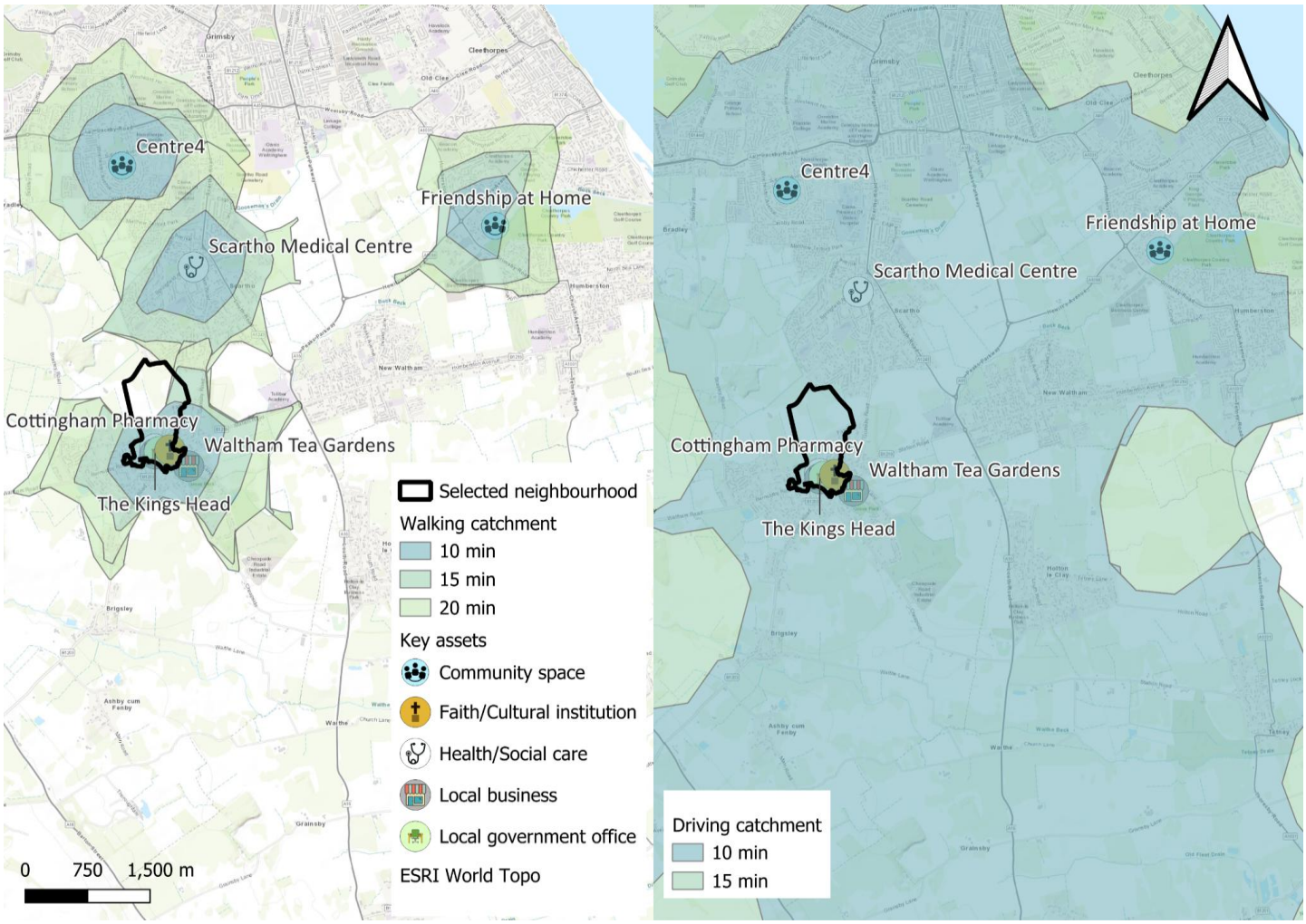


Neighbourhood assets

Most key assets are located within Waltham village. Two community Actors and one healthcare Actor are at a further distance, which might mean they are reachable by public transport or by car only. Key Actors identified in the Behavioural System Map sometimes offer support at various assets, plotted in Figure 15 below. For example, Friendship@Home's principal location is further away from the neighbourhood boundary, however their offer is varied, including at-home / in-hospital visits to older people and recently established drop-in sessions in All Saints Church. This is further explored in the Behavioural System Map section.

Waltham residents typically own at least one car/van (69.8%) and those who travel to work by car/van account for 73.7%, while those who take public transport account for 15% of the population. All assets have available parking, either free of cost or for customers and are accessible for wheelchair users. Car ownership rates and mode of travel to work reflect Waltham's rural nature, suggesting that even if an Actor is further away, it can still be considered accessible to most of the community.

Figure 15: Walking and driving catchment areas of key assets



Broadband connectivity

Two Waltham Output Areas (OAs) have broadband of <10mbit/s, which is considered slower than the needed speed for a modern life, supporting only basic internet use on a single device e.g. limiting simultaneous use by multiple devices and some tasks e.g. video calls. Given the slower speed provided, these internet packages tend to be more affordable. The output area classification by ESRC reveals that the two OAs with slower broadband are classified as retirement pockets and areas with communal retirement living, suggesting that older people in shared accommodation are more likely to face internet barriers. OFCOM data highlights that rural areas tend to report lower broadband speeds. Financial difficulties are the 2nd most present risk factor, and The Ageing in Place classification[34] for those aged 50+ defines Waltham as an area with "Struggling, More Vulnerable Urbanites", followed by a second class "Struggling White British". Residents of these areas tend to be female, white British, living in one-person households, which are detached/semi-detached or bungalows. They are also more likely to experience income deprivation and fuel poverty, often characterised by the lowest levels of educational attainment and internet engagement,

[34] Dolega, L., Dunning, R. and Nasuto, A. (2024). Classifying the Older Population - Understanding the Geography of Opportunities and Challenges in England. [online] Geographic Data Service, University of Liverpool, pp.1–105. Available at: https://data.geods.ac.uk/dataset/the-ageing-in-place-classification-aipc.

but high levels of unpaid care, poor health and more advanced dementia conditions. Residents tend to travel further to reach local amenities and health services.

Overall, the spatial analysis suggests that parts of Waltham village could be at risk of digital exclusion as older residents are likely to need strong social connection, better connectivity, increased motivation to use digital devices and financial support.

Waltham geospatial analysis key findings

- **Overlapping, moderate barriers:** Waltham faces a wide risk of digital exclusion driven by the accumulation of multiple moderate barriers. Because no single barrier dominates, the area requires a coordinated, systemic approach rather than one isolated intervention.
- **Isolation as the primary driver:** Social connection is the most significant barrier to digital inclusion. A high concentration of older residents living alone means that a large portion of the community lacks immediate, at-home digital support.
- **High car dependency:** While many key assets are within Waltham, its rural setting means residents rely on car ownership to access services. Outreach and drop-in services are therefore important for those unable to drive.
- **Poor connectivity in retirement housing:** Two OAs suffer from slow broadband (<10mbit/s) that only supports basic, single-device usage. Prevalence of these specific areas are classified as retirement pockets which include communal retirement living.
- **Compounding financial and health vulnerabilities:** Financial difficulty is the second highest risk factor. The local demographic is largely categorised as "Struggling, More Vulnerable Urbanites"—often older, one-person households dealing with income deprivation, fuel poverty, poor health, and low educational attainment.

Community engagement

Community insights for Waltham were gathered through a) an informal drop-in at Waltham Library for 1:1 conversations and a focus group session, following Workshop 4; and b) general insights provided by Friendship at Home from their local digital support attendees. The library drop-in included 14 participants aged 60 to 90 with mixed digital experience and attitudes. The following insights are therefore illustrative in nature. Further engagement will be important as interventions are tested and developed for delivery:

Engagement highlighted a strong sense of pride in the village, including its walkability, the convenience and appeal of the assets, and the quality of the natural environment. This could be positively leveraged and built on for any support offer.

Members of the community articulated why they or others don't use online options or digital devices. The strongest reasons were risk perception, covering fear of scams and concern about personal details disappearing; low confidence; and current habits alongside things generally working well without being online. Many saw support as needing to come from family members, such that the absence of this support was seen as a key barrier. There is therefore an opportunity to re-frame digital challenges towards other forms of support and to shape effective communications with positive examples for target cohorts, using the understanding of Drivers.

An identified wider interest area changed how some people described their motivation to do things online. Being online overall can feel a significant change and be reported as low interest. However, there was more interest expressed for specific potential uses that were introduced. These covered local events and meet-ups, particular needs for energy or housing topics, or an interest subject (such as cooking, genealogy). Interest and motivation are often more complex than an initial overall view or expression about online and digital activity.

Value in themed drop-ins for residents. Residents considered their being value in defining the themes of drop-ins, where they can troubleshoot, share examples with others, and discuss challenges. Example themes included banking knowhow, transport passes, energy bills, or health focuses. These could also benefit attendees through social connection. There is therefore an opportunity here to shape offers of support around common interest areas where online skills can support or add value. This may be more motivating than situations where someone feels they 'now need to do something online.'

Some community participants had positive experiences of some key digital activities including communication apps to keep in touch with family, use of the council website for waste and bin services, the use of prescription services, and for general search activities. Other use-cases were seen to be too difficult or unnecessary including completing council consultations and the booking health appointments.

> *'Yes, use it for emails – but sometimes this doesn't work and I can't see where it's gone. Can be frustrating… I might then send a letter next time as it's not clear how to resolve the email issue.'* (Community engagement participant)

Insights from Friendship@Home's current drop-in highlighted that people attended because they trusted the organisation and were familiar with the people running it. The informal delivery approach was beneficial alongside offering social connection. Attendees sought help with: service access, covering health related apps, online form filling, blue badge applications; and connection uses including emailing, event information, and transport applications.

The intervention outlines were also tested with the community:

The community participants felt that Waltham Library would be a useful hub that people would come along to for support. The library was seen as the centre of the village and an important asset, which could be used even more especially as it is trusted and familiar.

> *"It has it all for that (digital support)… the computers, this room."* (Community engagement participant)

There is therefore an opportunity to utilise the library space to host proposed interventions, including as a wider information and support hub for topic areas of common interest.

Also on the intervention outlines:

- **Peer-group support (Intervention 3)** feedback was generally positive - participants thought it would be best if people were on '*a similar page*' or similar level as it could form a positive, supportive environment. Other local venues could also be used, as people may have different spaces that feel right for them for this.
- **Device access (Intervention 1)** participants thought this could help some people to try devices before buying them but that some may require lessons and support. In general, it was important '*not to run before you can walk*' and to deliver this to those who are ready.
- **Video tutorials (Intervention 2)** participants believed video tutorials from the council could help refresh people after being shown how to do something in person. One suggestion was whether there

could be somewhere local to go and watch these, potentially with others, but participants believed this intervention would need good buy-in.

'I would maybe attend a drop in but I'm really not sure about online and don't feel too interested in learning… I know I should get more information but I don't even know where to go for this. '(Community engagement participant)

An opportunity for using local communication channels more effectively was also identified. These included newsletters delivered to homes, the use of noticeboards around the village, and word-of-mouth through current informal groups to inform the community on future support activities. Further, the nature of the village with some centrally clustered assets can enable activities to be made visible and build momentum over a few weeks of delivery in public spaces.

Waltham community engagement key findings:

- **Social connection can be an important co-benefit of digital support interventions.** It can also often be a route to delivering support effectively. This has been demonstrated by the Friendship at Home offer for Waltham, alongside recognition of the role current groups and social networks can play to promote and host support.
- I**nterests and hobbies can be a key driver for positive use of digital tools and services**. They also influence the motivation to learn new skills. This is important for understanding behaviours, and can inform intervention design.
- **Trusted messengers can quickly change the perception of digital support**: Shared knowledge and coordinated communication and signposting between organisations, assets and networks on digital routes and support is critical.
- **Digital experience and inclusion are a spectrum**: Individuals may be highly adept and confident with some uses and platforms but avoid others, even where they may seem similar to organisations.

Intervention Blueprints

Mapping participants identified the following intervention concepts as a result of the workshop series:

Intervention 1: Library-Based Digital Support Hub and Device Access

A structured partnership is established between NELC, Lincs Inspire, Waltham Library, and local VCSE organisations to develop the library as a designated, community-based digital support hub. This would build on existing local provision – particularly the Friendship@Home digital drop-in sessions at All Saints Church (located next to the library) – to create a more coordinated and visible offer, linking informal and structured support within a single, accessible location.

The hub would provide a mix of support formats, including regular drop-in sessions, volunteer-led 'digital champion' support, and opportunities to borrow and trial devices (e.g. tablets with connectivity); drawing on existing models such as the Good Things Foundation and Friendship@Home's device loan scheme. With previous Adult Education constraints no longer applying, there is also an opportunity to introduce light-touch, structured digital skills sessions tailored to locally relevant needs identified through resident engagement (e.g. accessing NHS services, online forms, or communication tools).

Importantly, digital support would be positioned within a broader, interest-led community offer (e.g. themed sessions or activity groups), allowing digital skills to be embedded in meaningful, socially engaging contexts rather than delivered as standalone training. This could include intergenerational elements (e.g. younger volunteers supporting older residents) as well as the sharing of positive local stories and peer examples to build trust and motivation.

The intervention also aims to strengthen coordination across the system by creating a shared physical anchor point for referrals, communication, and partnership working. Over time, long-term sustainability and scalability will depend on additional resourcing: library staff possess the necessary skills and motivation but have limited capacity to expand delivery without the recruitment of more staff members. There is potential to build internal capacity within the library through staff shadowing and upskilling, supporting longer-term sustainability.

Potential Delivery Model:

This intervention could be delivered through the NELC Insights / R&E Team through a partnership with Lincs Inspire; Waltham Library, Friendship@Home, and other VCSE partners which support delivery, alongside volunteer digital champions.

Target Behaviours

- Older people attend library-based digital support sessions
- Volunteers act as digital champions within library settings
- Older people borrow and trial digital devices
- VCSE partners deliver coordinated support in library spaces

Beneficiaries

- Primary: Older people in Waltham and surrounding areas
- Secondary: VCSE organisations, library staff, and wider community partners

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Waltham Library lack of a designated digital support hub" (Cluster 4: Receiving Support)

Readiness Score

- 1 - 2 (Low - Moderate Readiness)

This intervention addresses COM-B environmental access barriers (limited venues, lack of a consistent support location) and practical capability barriers (device access, hands-on support), while also responding to motivational barriers through social, interest-led engagement and peer influence. It creates a visible and trusted entry point into the system, strengthens coordination between local Actors, and provides a foundation for more preventative, skills-based support.

Key risks include:

- Limited staff capacity within the library - agreement from Lincs Inspire is required to use the library for this purpose.
- Reliance on volunteer recruitment and retention, and the need for coordination with Lincs Inspire.

About the Readiness Score

The readiness score assesses the extent to which the intervention can be implemented:

1. Low readiness - No clear owner, design and development required, and early engagement necessary.

2. Moderate readiness - intervention is feasible and grounded in existing assets, but requires piloting, scalability testing and refinement.

3. High readiness - ready to be tested with target groups and refined where necessary, near implementation, with low barriers and low risk profile for implementation.

The readiness score is further

- Potential trust barriers among older residents - particularly around using unfamiliar or loaned devices and for more sensitive tasks (e.g. online banking) - which may take time to overcome.

Intervention 2: Home-Based and Task-Focused Skills Support

Building on the established expertise of Friendship@Home, the existing 'digital buddy at home' offer is expanded and formalised to reach older people who are unable or unlikely to access community-based provision. This includes those with mobility or health limitations, as well as individuals with particularly low digital engagement or high support needs. The intervention is delivered through tailored, one-to-one support in the home, structured around small, task-based learning experiences that reflect immediate, meaningful needs (e.g. booking appointments, communicating with family), rather than generic skills training.

Support is differentiated based on individual profiles, recognising that needs may vary significantly (e.g. between those with physical access barriers and those with low confidence or motivation).

Where appropriate, in-person support is complemented by the gradual introduction of video call assistance, enabling a supported transition towards more independent, digitally enabled forms of help. Crucially, the intervention is designed to act as a gateway into the wider support ecosystem: individuals are actively signposted to relevant follow-on opportunities (e.g. library-based sessions or social activities) as their confidence grows, helping to avoid long-term dependency on one-to-one support.

Potential Delivery Model

- A trusted Actor, such as Friendship@Home could lead delivery as the primary provider, with NELC Insights / R&E Team supporting through user insight, coordination, and programme refinement

Target Behaviours

- Older people complete specific digital tasks with guided support
- Older people participate in short, tailored digital skills sessions
- Older people use video calls to access assistance when appropriate

Beneficiaries

- Primary: Older people with mobility issues, ill health, or very low digital engagement
- Secondary: Volunteer digital buddies and support providers

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People habitual reliance on / expectation of in-person options" (Cluster 2: Accessing Digital Services)
- "Older People mobility issues and ill health limit access to in-person services even when those are available" (Cluster 4: Receiving Support)
- "Older People acquire digital skills" (Cluster 5: Acquiring Digital Skills)

Readiness Score

  - 2 (Moderate Readiness)

This intervention addresses capability and access barriers by delivering support at home, while also responding to motivational barriers through highly relevant, personalised learning. It leverages the strong trust and reach of Friendship@Home, positioning them as a key system anchor.

However, the model is resource-intensive and may place additional strain on Friendship@Home's capacity. There is also a risk that highly task-focused, in-home support reinforces passive Behaviours (i.e. having problems solved for individuals rather than building skills), and that it limits opportunities for social connection compared to community-based provision. To mitigate this, clear pathways into wider, more social and group-based offers should be embedded from the outset, using the home-based model as both an access point and a trust-building mechanism that can support longer-term engagement.

Intervention 3: Trust-Building and Peer-Led Engagement

This intervention focuses on strengthening trust and motivation by embedding digital engagement within existing information pathways and community networks. Building on outcomes from other interventions, positive and relatable 'digital success stories' - particularly those demonstrating enhanced social connection (e.g. staying in touch with family, joining local activities) - are shared through trusted offline channels such as Waltham Parish and NELC newsletters. These stories are carefully selected and framed to reflect a range of starting points and ability levels, helping to normalise digital engagement and reduce perceived risk.

In parallel, Friendship@Home facilitates informal, peer-led group sessions that build directly on engagement from the library-based hub and home-based support offer. Individuals who have begun to build confidence through these routes are encouraged to take part in small, interest-based group sessions (e.g. hobbies or local activities), where digital elements are introduced organically rather than as formal training. These sessions also act as a key source of locally grounded 'digital success stories', creating a positive reinforcing cycle between participation and storytelling.

Where appropriate, peer champions are identified from within these groups and supported to take on light-touch facilitation roles, reinforcing trust through familiar and credible voices. Group formats are tailored to confidence levels to maintain supportive dynamics, while also providing a bridge to other support offers (e.g. returning to the library hub for further learning or accessing more structured guidance).

Potential Delivery Lead

- NELC Insights / R&E Team and Waltham Parish Council lead on communications and storytelling; Friendship@Home and other VCSE partners support delivery of peer-led sessions

Target Behaviours

- Older people participate in peer support groups
- Older people express willingness to try digital services
- Community members share and engage with local success stories

Beneficiaries

- Primary: Older people lacking trust in digital systems and devices
- Secondary: Local community networks and volunteers

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People lack of trust in digital systems and devices" (Cluster 2: Accessing Digital Services, Cluster 5: Acquiring Digital Skills)
- "Friendship@Home understanding / appreciation of the positive impact of in-person contact" (Cluster 6: Social Connection)

Readiness Score

- 1 (Low Readiness)

This intervention addresses motivational barriers by leveraging social proof, peer influence, and trusted local relationships. It complements more formal support offers by translating skills and positive experiences into visible, community-led engagement, while also strengthening social connection as both a Driver and outcome of digital inclusion.

Key risks include:

- potential negative perceptions to spread within groups (e.g. concerns about safety);
- challenges in managing group dynamics where confidence levels vary; and,
- sensitivities around sharing personal stories in a small community.

Careful facilitation, optional anonymity, and thoughtful matching of participants will be important to mitigate these risks and ensure inclusive, supportive environments.

Benefits - and learning

NELC participants reflected the following benefits from the trial:

- The project's approach was reported to be well structured, engaging, and accessible. It was reported to be a useful and enjoyable experience.
- Bringing people together in the same room was beneficial at this stage in the wider NELC digital inclusion programme, as the BSM approach built a shared and timely understanding of digital inclusion at the neighbourhood-level.
- The method worked well to build understanding of Behaviours and Drivers of both individuals and organisations. This understanding can inform more effective service design. In particular, learning was gained on the role of confidence, trust, and social connection for digital exclusion.
- The method also worked well to ensure different participants' insights and understanding of digital inclusion and neighbourhood fed in throughout the process and into the mapping.
- The council team has brought the BSM outputs, with insights and local case studies, into their wider programme's thinking (and its Miro board) to set out what is known and what can be done for digital inclusion.
- The project helped strengthen some local relationships. This contributed to a new digital support activity being established and promoted, where Friendship at Home began to offer a digital drop-in (which they provide in the wider authority area) in Waltham.
- The community engagement, coming after Workshop 4, was a useful exercise to check and validate some of the thinking within the BSM whilst it also surfaced some new insights and brought helpful case study examples to accompany the BSM.
- The intervention blueprints were tailored to the Waltham neighbourhood, subject to further resident testing.

Limitations - and recommended improvements

NELC participants reflected that there are several limitations to be mitigated for future BSM projects:

- The time intensity of the workshops and some challenges maintaining consistent attendance from partner organisations. As well as inconsistent attendance, there were some gaps in representation partly due to logistical challenges and partly due to the workshop group size being limited to 10-12.

- Inconsistent attendance impacts the development of the map and can lead to bias, as connections may not be made from earlier workshop contributions. The presence of other important Actors in the workshops may have brought other insights into the BSM development.
- A few participants found the language around Behaviour systems initially complex, but this improved as the project progressed. It was suggested that the language needs to be clearer and that examples help this understanding.
- It was challenging to bring in more localised data, such as for use in the spatial analysis, as this was not available or needed more upfront time to source this.
- The online workshops were less accessible for some partners given their ability to fully participate on the Miro software and to navigate the full BSM on a screen. It is suggested that adaptations could be made such as bringing some partners together for the online sessions with a dedicated lead for the online aspects.
- The lack of earlier community engagement was also strongly highlighted, as it was during the project where there was a lack of clarity on the scope and responsibility for engagement.
- There is a risk that later engagement is framed to validate what has already been mapped rather than to surface genuine insights or alternative perspectives. Undertaking community engagement would be particularly valuable -
    - Around Workshop 1, to identify which 'Actors' residents know and their perceptions and current Behaviours in relation to them. This could help identify attendees for the workshops.
    - Secondly, to directly inform on their Drivers, especially motivations and feelings. This could be done in parallel engagement activity to then feed into a more focused workshop group. Though there could also be adaptations to directly include the resident voice in workshop sessions.

Engagement and testing are critical for interventions that emerge, especially where earlier engagement was not undertaken. This was demonstrated in the Waltham community engagement and is recommended to continue as part of next steps.

In addition, dedicated learning sessions on COM-B and the Behaviour Change Wheel were identified to be of keen interest to support the next steps of design and delivery. The NELC team also identified that there would be benefit to being more informed on how other areas were progressing during the project, with an interest to continue to learn from and share with others.

Next steps

The NELC team has identified a strong opportunity to now fully design interventions driven by this trial and their wider digital inclusion programme. This design can now happen within a better understood system.

To develop interventions further NELC recognises that testing with the target cohort will be key. This will form part of next steps. The NELC team and one partner reported confidence in using the BSM methodology again.

However, the approach is also recognised to be time intensive, where clear boundary setting is important. For example, following wider system mapping it could be a useful method to then focus on a few specific Behaviours. Having clear guidance and learning materials will be useful to support future uses of the BSM method.

The BSM map is also likely to continue to be used as a key reference document. There is also potential to update the BSM over time and keep it as a live document.

Noel Park and West Green

Overview

Noel Park and West Green are two wards in the London Borough of Haringey, however in the context of this project, we use these names to refer to the selected neighbourhoods within the wider political wards, unless otherwise stated. Key information about the selected neighbourhoods include:

Noel Park

- **Population:** 6,851 people.
- **Age:** Residents aged 60+ make up 16.4% overall
- **Ethnicity:** 9% of people of White ethnicity, 20.4% of Black, Black British, Black Welsh, Caribbean or African ethnicity, 11.9% of Asian, Asian British or Asian Welsh ethnicity and 17.7% are of mixed, multiple or other ethnic groups.
- **Household composition:** 29.9% of households are one person households
- **Health and wellbeing:** In 2021, most residents (81.7%) reported good or very good health while the remaining were in fair (13%), bad (5.5%) or very bad health (1.7%). Fewer (17.1%) residents have a disability and 9.1% identify as an unpaid carer.
- **Deprivation:** 33.9% of households are deprived in one dimension, 21% in two, 7.5% in three or more.

West Green

- **Population:** 8,688 people.
- **Age:** Residents aged 60+ make up 14.5% overall
- **Ethnicity:** 52.8% white, 19.3% Black, Black British, Black Welsh, Caribbean or Africa, 10.2% Asian, Asian British or Asian Welsh ethnicity and 17.5% are of mixed, multiple or other ethnic groups.
- **Household composition:** 32.5% of households are one person households
- **Health and wellbeing:** In 2021, most residents (83.6%) reported good or very good health while the remaining were in fair (12.7%), bad (4.1%) or very bad health (1.5%). Fewer (14.7%) residents have a disability and 7.3 identify as an unpaid carer.
- **Deprivation:** 35.5% of households are deprived in one dimension, 17.7% in two, 7.1% in three or more.

Digital inclusion challenge

Previous insights gathered from Haringey's digital inclusion survey of under-engaged residents highlighted that a large number of responses from Noel Park and West Green cited a preference for in-person engagement and access to services. This preference has been recognised by the Council and community partners in previous engagement, and was selected as a behavioural barrier that required further investigation.

In addition to this Haringey Council also noted the following Drivers for selecting Noel Park and West Green as a site for trialling BSM:

- A need to identify wider barriers for the target cohort and to understand available community resources for targeting interventions; and,
- Opportunity to bring local networks together to share insights and intelligence.

Haringey Council applied BSM to support actions that align to the Council's digital inclusion principles of committing to engaging with communities to understand the needs and challenges of residents from a range of ages, backgrounds and cultures. The principles also include a need to understand unique Drivers relevant to the context of residents of both estates.

BSM on Noel Park and West Green also aligns to two of the eight the DSIT Digital Action Plan Priorities:

- B. Breaking down barriers to digital services
- D. Building confidence and supporting local delivery

Synthesis summary

The following sections present detailed analysis and insights of BSM and resulting intervention blueprints, as well as complimentary geospatial analysis and community engagement. Commonalities and differences between methods are explored in the Findings section.

This summary presents what emerged across these methods through the synthesis approach that is detailed in the methodology section above:

- **Digital exclusion in Noel Park and West Green is driven less by lack of provision and more by fragmentation, limited coordination and unclear ownership across a complex system.** BSM shows a dense network of VCSEs, council services and community assets; however, there is limited coordination between them, overlapping roles, and low visibility of who provides what. Spatial analysis supports the presence of multiple assets and generally good transport access to them, confirming that the core issue is not availability but difficulty navigating and consistently accessing support in a complex system.
- **Underlying drivers for established in-person preferences were collected during the BSM process but remain unvalidated due to lack of resident insight.** BSM produced several possible underlying drivers for the previously established in-person preference shaping digital engagement. BSM prompted further investigation through a research intervention designed to uncover the drivers of this preference. Direct community engagement will be included to validate and test existing assumptions.
- **Affordability, capability, and connectivity interact to create uneven and locally variable barriers to digital inclusion.** Spatial analysis identified financial constraints as the most significant driver, alongside adult skills and training and pockets of poor broadband connectivity. BSM, while not surfacing affordability and connectivity issues itself, highlights how these may translate into behavioural outcomes such as delayed engagement or reliance on reactive support. Together, they point to a system where barriers are interdependent and vary across neighbourhoods - requiring targeted and context-specific responses.
- **Varied support is available but often focuses on reactive 'do-it-for-them' models, which limits long-term capability building.** BSM shows that older residents in the neighbourhood can access support through libraries, VCSEs

and personal networks, but this is frequently oriented toward solving immediate problems rather than building transferable skills.
- **Information flows and accessibility are constrained by inconsistent communication, language barriers, and lack of integration between providers.** BSM highlights limited signposting across organisations and a resulting low awareness of available support among older people, compounded by inconsistent use of jargon-free and translated communications. Spatial analysis confirms the presence of language barriers in several areas, but without resident validation it is unclear how these are experienced in practice. Together, this points to a critical gap in understanding how information is distributed and acted upon through the system.

Behavioural Systems Map

System Objective

In Workshop 1, the core participant group jointly established the following system objective:

Our goal is to deepen our understanding of why older residents in Noel Park & West Green strongly prefer face-to-face interactions, and to use this insight to design support that both honours these preferences and helps residents participate comfortably and confidently in essential online services and local decision-making.This involves:

- Building confidence and skills to use digital tools safely in an era of AI and misinformation;
- Identifying and removing barriers to accessing and navigating digital applications and processes;
- Accommodating diverse learning styles to ensure support is genuinely accessible to all; and,
- Strengthening collaborations to coordinate support and amplify older residents' voices.

Overview

BSM reveals that in Noel Park and West Green, the digital inclusion landscape is characterised less by a lack of available support and more by fragmentation, limited coordination, and a need for in-depth research into resident preferences and needs.

At the structural level, digital-by-default services create barriers that are amplified by inconsistent accessibility and limited insight-sharing across Council Teams and VCSEs. Haringey Council's Digital Inclusion team currently operates within this system with limited resources and limited visibility of the range of available support across the neighbourhood, whereas residents face a confusing landscape of varied services and offers of digital support and skill development.

Mapping by stakeholders shows that, at the behavioural level, digitally excluded older people experience low confidence, fear of scams and unsafe online environments, as well as delayed engagement with digital

tasks have been identified as Drivers that reinforce reliance on in-person services and reactive support. Furthermore, while there are a range of different support options available, they are often oriented towards short-term problem-solving rather than long-term capacity-building.

However, the system has significant strengths: a dense and active network of VCSEs, reliable community assets, and evidence of the social value of in-person engagement; with key Actors such as the Haringey Over 50s Forum, Wood Green Library, and Haringey Reach & Connect already playing important bridging roles: connecting older people to services. Overall, the key opportunity lies in shifting from a system of many but weakly aligned Actors to one with clear coordination, a shared understanding of accessibility for older people, and a stronger integration between social support and digital skills development.

The full Behavioural Systems Map is accessible on the project website.

Cluster analysis

BSM revealed 6 clusters for the Noel Park and West Green neighbourhood digital inclusion system:

Cluster 1: Digital-by-default systems / council services

This cluster reflects how system-level service design and fragmented coordination shape accessibility, with clear opportunities to better anticipate the needs of older people through increased insight-sharing.

The digital inclusion system in Noel Park and West Green is characterised by a strategic shift towards digital-by-default services (exemplified by Haringey Council, the Department for Work and Pensions, local banks) as a result of cost pressures on service providers. Accessibility issues for older people are further exacerbated by the fragmentation of insights into support needs: the Digital Inclusion team in particular is positioned as a coordinator but does not currently work directly with residents nor is it fully embedded in the support ecosystem. Consequently, its ability to understand resident needs and target interventions accordingly is limited.

This is compounded by a lack of shared understanding of what 'accessible services' should entail in practice, reinforcing confusing user experiences (e.g. via jargon-heavy systems). However, existing structures and engagement models - such as the Haringey Council Adult Care team working directly with residents or Haringey Community Collaborative working across a network of VCSEs - offer a strong foundation for improving coordination and insight-sharing.

In summary, mapping shows that the challenge presents itself less as an absence of provision but more as a need for alignment; in particular, clarifying roles across the Council and VCSE networks to reduce duplication and strengthening information flows to enable more strategic use of limited resources while maintaining essential non-digital pathways.

Cluster 2: Accessing Digital Services

This cluster captures how system complexity and low confidence among the older population interact to reinforce both a strong preference for in-person services and disengagement.

Older residents navigate a complex and fragmented service landscape, where digital access is often required across multiple systems (e.g. NHS, DWP, banking) - each with different processes and interfaces. This increases cognitive burden and contributes to confusion, particularly when combined with limited foundational digital skills and declining health.

Furthermore, the map illustrates motivational barriers including a fear of scams, low confidence and the perceived irrelevance of digital skills. A key dynamic here is delayed engagement: residents often do not act until issues become urgent, at which point stress and frustration can increase reliance on reactive but inconsistent support (e.g. from friends or family).

The widely observed preference for in-person services is critical to this cluster. While multiple plausible Drivers were identified (e.g. immediacy of in-person contact, the desire for social interaction, or perceived safety relative to online activities), these remain unvalidated by residents and thus highlight the need and opportunity for dedicated research into underlying motivations; without this, future interventions risk misalignment with resident needs and preferences.

Cluster 3: Receiving Support

This cluster highlights a support ecosystem that is rich and varied but often oriented toward short-term resolutions rather than building long-term capability.

Older residents in Noel Park and West Green can draw on a wide range of support channels including libraries (e.g. Wood Green library), VCSEs (e.g. Haringey Over 50s Forum and Haringey Reach & Connect), as well as personal networks. However, access to these is highly variable: in-person formal support offers appear less accessible to those who struggle with mobility or other health issues, whereas informal support via family members creates vulnerabilities when it is absent or disrupted; a concrete risk discussed during the workshops is overreliance on one's spouse for digital tasks leading to significant issues in the event of their passing.

In addition to this, a central dynamic appears to be the prevalence of 'do it for them' support models. While these approaches are efficient in resolving immediate issues such as filling out forms - and should thus not be discounted - they can inadvertently reinforce dependency and limit skill development. This is further shaped by variation in VCSE mission alignment with digital support as well as capability constraints: organisations focused on digital inclusion act as strong enablers, while others lack the expertise or incentive to help older residents build digital skills.

Importantly, the system does not lack dedicated organisations and institutions; rather, it is characterised by overlapping provision and competition for service users and funding, which may lead to inefficiencies and duplication. This suggests a need for improved coordination and collaboration and clear role definition to enhance both reach and impact.

Cluster 4: Information Flows and Translation

This cluster reflects how limited information flows can decrease awareness and navigation of support, particularly for non-English speakers.

A key barrier identified by stakeholders that sits across the neighbourhood system is that residents often do not know what support is available or how to access it. Although multiple organisations provide signposting and advice (e.g. Generation Exchange or Tottenham Hall Community Centre), these efforts are dispersed and not systematically integrated, with overlapping offers and a low awareness of responsibilities between providers.

Language and communication barriers further constrain access: inconsistent use of jargon-free communication across services negatively impacts accessibility for English-speaking residents and, to a larger degree, for non-English speaking residents. Targeted translation support exists (e.g. Old Alone Haringey for Spanish speakers and Generation Exchange for Polish speakers), but this provision is uneven and dependent on specific community groups some residents may not be aware of or unable to access.

The recent launch of a centralised information resource - the 'Haringey Gets Digital' webpage - indicates progress towards improving accessibility and visibility of support. However, stakeholders noted that the effectiveness of such tools depends on integration with trusted offline channels; thus, strengthening coordination across information and advice providers, particularly those dedicated towards helping non-English speakers, represent key opportunities.

Cluster 5: Digital skills

This cluster captures opportunities for digital skill development that are limited by capacity constraints and infrequent engagement, both of which prevent widespread, sustained capability development across the neighbourhood.

Mapping highlights that digital skills provision is delivered through a handful of community-based organisations and spaces (e.g. digital drop-ins at Wood Green Library such as Coffee & Computers) but is often limited in scale and frequency. It was noted that effective learning requires repeated engagement, but participants reflected that sessions are often small and irregular due to limited physical space and staff shortages.

For older people, individual level barriers including low confidence, limited awareness of available support and competing priorities such as health, further reduce participation. Access to devices and connectivity also play a crucial role in skills development; however, this is partially addressed through provision by Haringey Council Financial Support team, Wood Green Library, and Haringey Reach & Connect.

The Haringey Over 50s Forum emerged as a key coordination Actor, both in delivering bi-monthly group events and awareness sessions and in synthesising insights on resident needs. Overall, mapping shows that the system consists of varied provision, but would benefit from an increased consistency of delivery and from embedding skills development within trusted and socially engaging contexts.

Cluster 6: Reducing Isolation

This cluster highlights the role of social connection as both an outcome of and a pathway into digital inclusion.

Mapping highlights that digital inclusion initiatives in Noel Park and Wood Green contribute to reducing isolation via two main pathways: directly, through social interaction at in-person activities, and indirectly, by enabling older people to connect with family and friends using digital tools.

Actors such as Haringey Reach & Connect and Generation Exchange demonstrate the value of relational and intergenerational approaches, combining practical support with opportunities for social engagement. These models may increase motivation and lower barriers to participation, particularly for those with whom purely functional digital skills provision does not resonate.

Hybrid communication channels such as the Haringey Over 50s Forum's newsletter, which is distributed both digitally and in print, provide an important bridge across different levels of digital inclusion and mobility.

Overall, this cluster underscores a broader system insight: in-person preferences may function not just as a barrier but also as an enabler; leveraging the social value of face-to-face interactions could strengthen both participation and long-term outcomes across the wider system.

Geospatial analysis

Digital Exclusion Index

Geospatial analysis shows that Haringey is a borough separated both physically - with a railway line running through the centre of the borough - and in various socio-economic and demographic challenges and opportunities to the east and west of the railway line. Through the digital exclusion spatial index, we find that residents to the west of the borough are much less likely to experience digital exclusion (1 LSOA has a chance of >0.6), while those living to the east of the rail line have higher chances (8 LSOAs have a chance of >0.6). The selected neighbourhoods of, Noel Park and West Green, are located to the east of the railway line, indicated in all spatial maps by a thick black boundary.

The Noel Park and West Green neighbourhoods are made up of multiple LSOAs, reflecting the two selected neighbourhood areas that sit within two adjacent wards. These neighbourhood areas, as LSOAs, are not adjoining so a single digital exclusion risk score does not exist. Instead, the risk of someone experiencing digital exclusion is varied - one LSOA in West Green has an index score of 0.8, three LSOAs across both neighbourhoods have scores between 0.5 and 0.6, the rest are less than 0.4 (Figure 16).

About the Index and methodology

Analysis was conducted at the OA and LSOA levels at 2 layers:

Layer 1 (Quantitative) - aggregated national datasets including the 2021 Census and the Index of Multiple Deprivation (IMD).

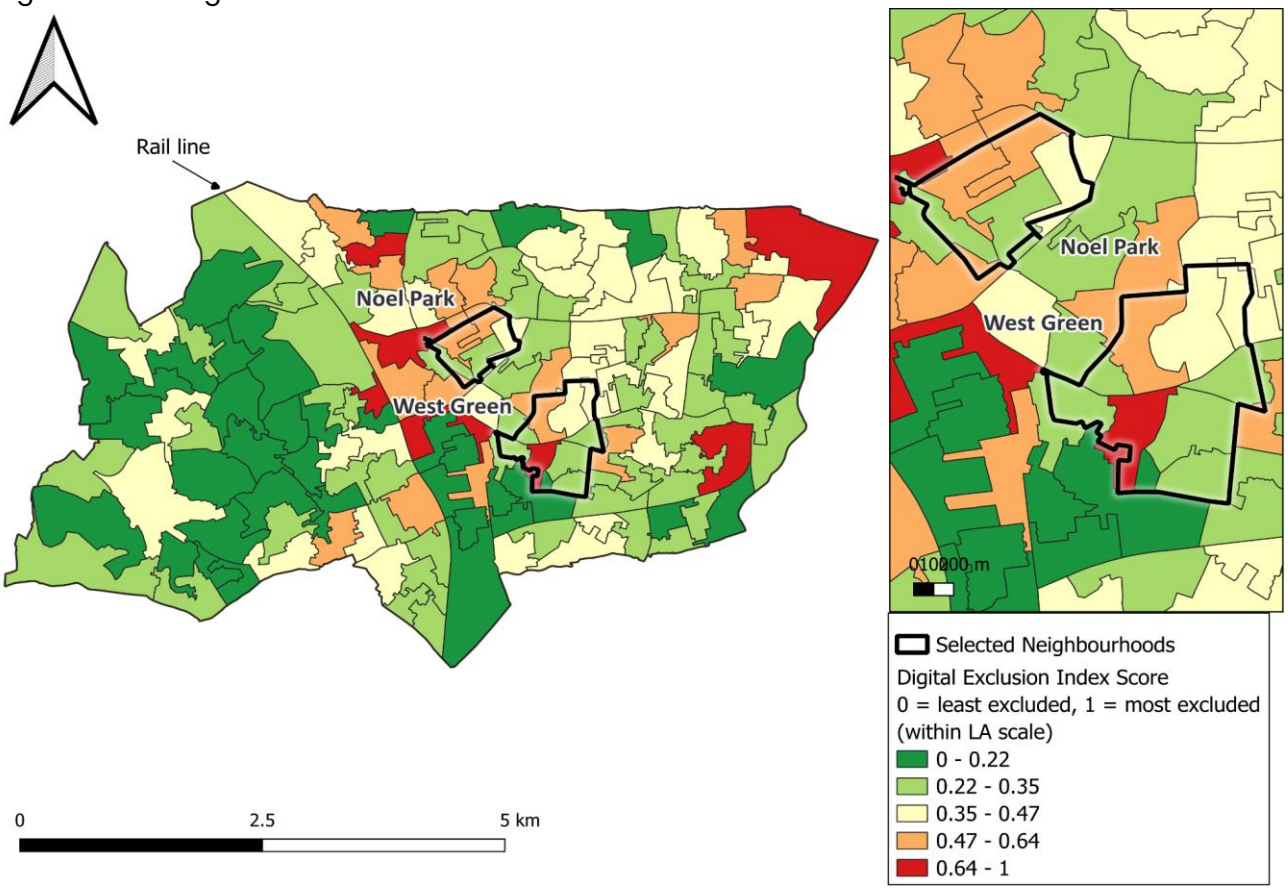
Layer 2 (Contextual) - local information such as key assets and additional open-source datasets such as English proficiency.

Digital Exclusion Index proxy Indicators (layer 1):

Income deprivation (aged 66+), lives alone (aged 65+), broadband speed, long-term disability, digital propensity, adult skills, geographical barriers to services, EAL.

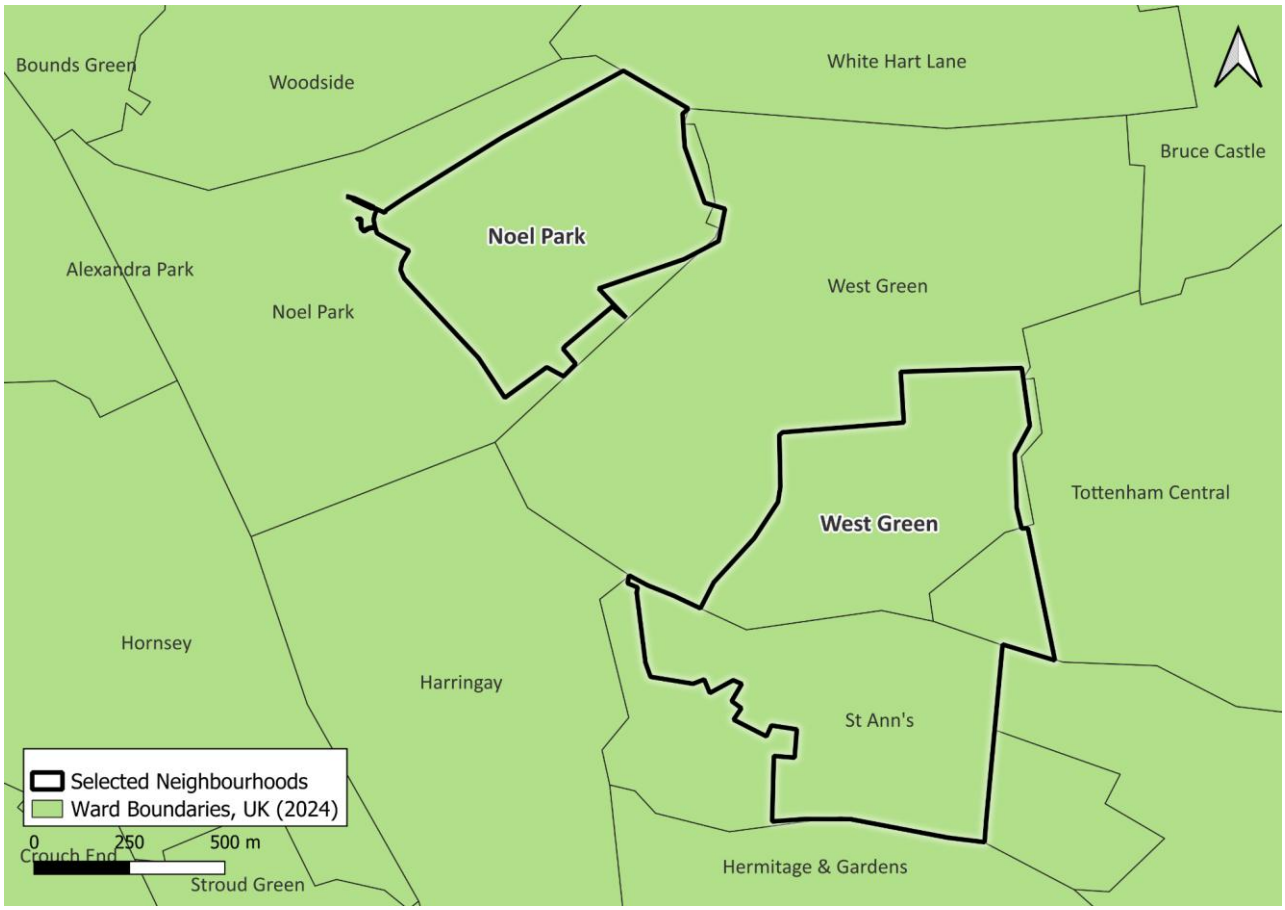
For more information, see the methodology section.

Figure 16: The Digital Exclusion Index Score where 0 = least & 1 = most



A digital exclusion score for all ages is presented alongside risk profiles for the two neighbourhoods. In West Green, the risk profile is mostly medium: most indicators have a low score. This is the same for residents living to the east of Noel Park, while those living to the west have a medium-high risk of being digitally excluded. These risk profiles may differ if the data was strictly exploring the 60+ aged demographic. Multiple barriers might be driving the risk of digital exclusion. Financial barriers for those aged 60+ was a driver with significant presence in all LSOAs within the two selected neighbourhoods. The Haringey team have also provided some insight into the Universal Credit Claimants and Social Housing, at the ward-level (boundaries shown on the map below). In November 2022 the proportions of the population who were aged 50+ and were at that time claiming Universal Credit were 16.4% in Noel Park and 15.3% in West Green wards. The rates of socially rented housing across all age groups were 35% in Noel Park and 27% in West Green wards. These findings may suggest that affordability is a key challenge for older people when it comes to digital exclusion.

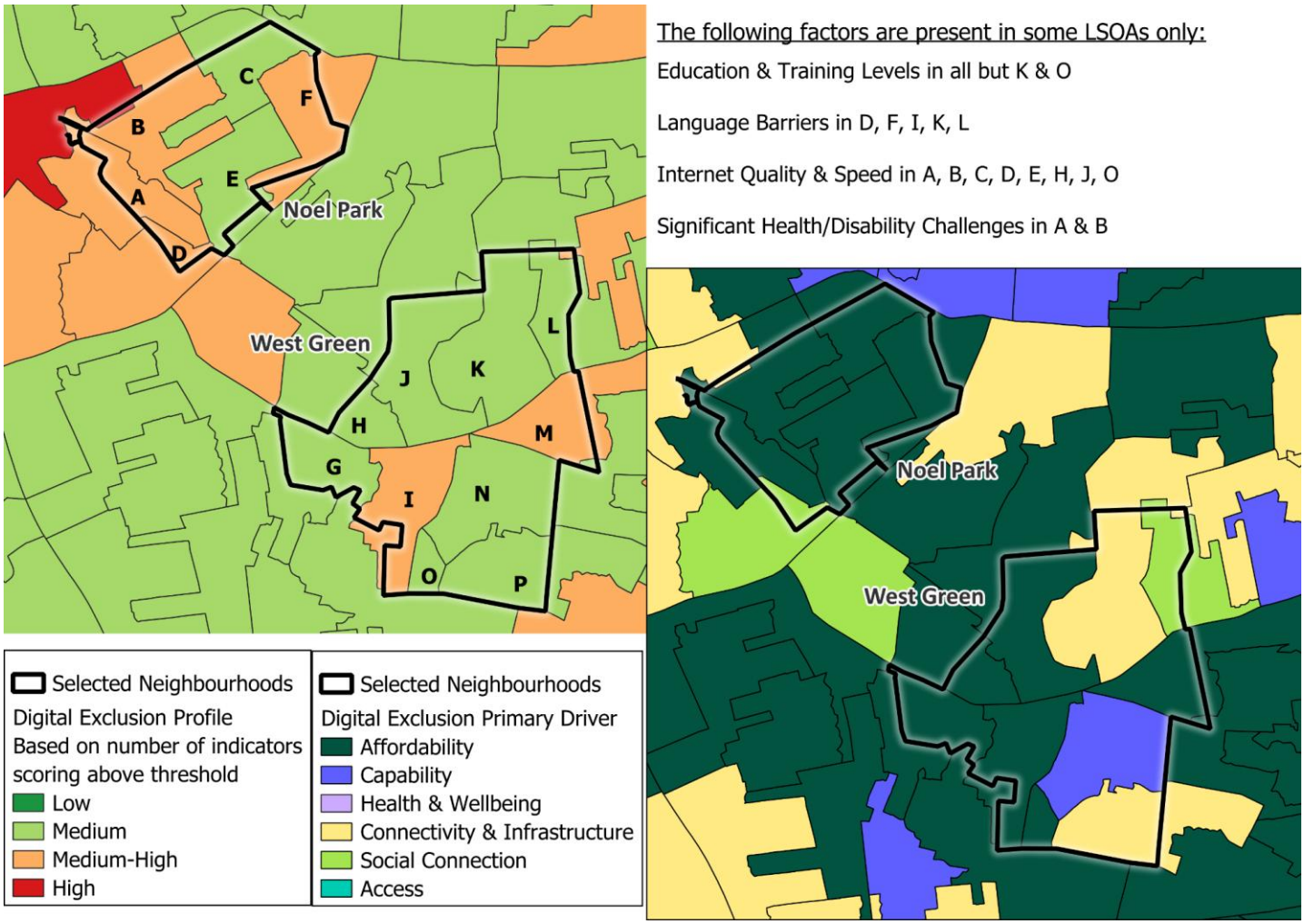
Figure 17: Neighbourhood boundaries and Ward boundaries



Other barriers with significant presence include adult education and training levels and language barriers. Adult Education and training levels feed into capability, alongside the digital propensity index - this is illustrated in Figure 18 Map B - residents in the purple shaded OA[35] in West Green could be in need of skills support. Social connection, and connectivity and infrastructure, are partly present in both neighbourhood areas. Language barriers also have significant presence in 5 LSOAs, which can be a factor for both lower capability and social connection challenges.

[35] Output Area (OA) - are the smallest geographical units used by the Office for National Statistics (ONS), typically containing roughly 125 households (~300 residents) to allow for local analysis. Only indicators used in layer 2 are available at this level.

Figure 18: Map A - Risk of Digital Exclusion (left), Map B - Primary Driver of Digital Exclusion (right)



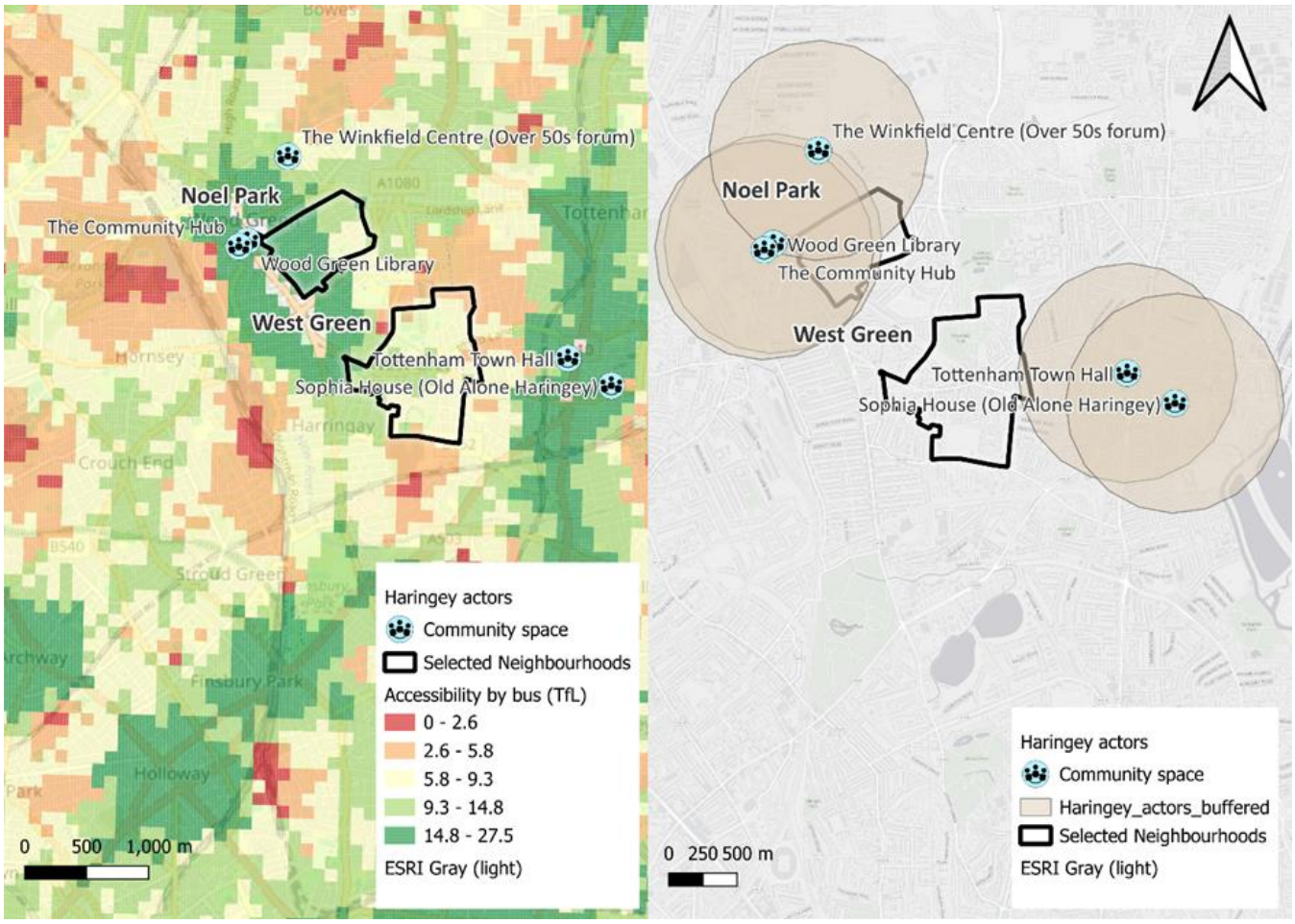
Neighbourhood Assets

Public transport accessibility was assessed using TfL's PTAL Bus scores, this is overlaid by key assets (6 in total) relevant to digital exclusion and older people living in Noel Park and West Green. This includes community spaces only, but data shows that none are within the neighbourhoods' boundaries. Figure 19 Map D overlays the assets with 800m walking catchment as that was the second most common way of reaching places amongst older people according to TfL.

Overall, Noel Park and West Green and the six assets have high PTAL combined scores - including all public transport available. When considering accessibility by foot and bus routes - four out of six assets are located within walking distance from Noel Park. All six assets have very good bus accessibility as does most of Noel Park meaning older residents from Noel Park are likely to be able to reach all key assets by bus and some by foot.

For those living in West Green bus accessibility is slightly lower but still moderately good, meaning residents are likely to still be able to reach all key assets by bus but the buses might stop less frequently and/or the walk to the nearest bus stop is slightly longer. Those living at the edge to the west of the neighbourhood might perceive Tottenham Town Hall at a suitable distance to walk. However, in general no assets are located at a walking distance for residents in West Green. None of the key assets have dedicated parking on-site but all are accessible for wheelchair users.

Figure 19: Map C - Key assets and PTAL bus scores (left) / Map D - Key assets and 800m walkability catchments (right)



Broadband Connectivity

Internet connectivity and infrastructure were a primary driver for digital exclusion for some LSOAs in West Green. To provide a more granular assessment of connectivity, residential broadband download speed was also mapped at the OA level. Multiple OAs have broadband of <10mbit/s, which is considered slower than the needed speed for a modern life, supporting only basic internet use on a single device e.g. limiting simultaneous use by multiple devices and tasks including video calls. Given the slower speed provided, these internet packages tend to be more affordable. The areas which experienced the lowest broadband speed were also classified as “Private Rental Ethnic Minority Families” and “City Service Workers” (Output Area Classification by ESRC).

Overall, the spatial analysis suggests that when older people at Noel Park and West Green experience digital exclusion, it is likely to be driven by affordability, capability and connectivity and infrastructure barriers. Income deprivation affecting older people has been identified as the most significant barrier, followed by adult skills and training and low internet quality and speed. This could suggest that the cost of devices, data and digital services can be challenging for this community. This together with lack of necessary skills and adequate broadband speeds can have significant impact on residents’ digital inclusion levels. Lower English language proficiency across parts of the estates could indicate difficulties in seeking and providing digital support. For these neighbourhoods, social connection did not emerge as a primary driver of digital exclusion but was partly present at the edge of the selected neighbourhoods/estates.

Noel Park and West Green neighbourhood geospatial analysis key findings:

- **An East/West geographic divide:** Haringey is divided by a central rail line, with residents to the east facing a significantly higher risk of digital exclusion compared to the more affluent west. The selected neighbourhoods of Noel Park and West Green sit in this higher risk eastern section.
- **Affordability as the primary driver:** Financial constraints severely impact the 60+ demographic. This economic barrier is highlighted by high rates of socially rented housing and a high proportion of residents aged 50+ claiming Universal Credit.
- **Language and capability barriers:** Beyond physical and financial access, digital inclusion is hindered by low adult education levels and prominent language barriers (which are a significant factor across 5 LSOAs). These challenges make it difficult for residents to confidently use digital tools or seek out necessary support.
- **Poor broadband connectivity:** Connectivity is a localised but severe issue, with multiple OAs restricted to slow broadband speeds (<10mbit/s) that cannot support modern simultaneous device usage.
- **Unequal Access to Community Support Assets:** None of the key community assets are located directly within the neighbourhood boundaries, but transport access varies. Noel Park has very good bus connectivity and 4 out of 6 assets within walking distance; conversely, West Green has no assets within general walking distance and relies on slightly less frequent bus routes.

Community engagement

There was strong desire from stakeholders to undertake validation testing with residents but community engagement was a challenge given the project timescale and resource availability.

The lack of community engagement is mitigated somewhat by strong VCS participation in the workshop series, which provides important insights to the BSM design and development process.

Haringey Council is committed to undertaking community engagement for taking forward any interventions, into full design and development, that may result from the BSM process.

Intervention Blueprints

Core participants identified the following intervention concepts as a result of the workshop series:

Intervention 1: Council Digital Information Hub and Internal Best-Practice Promotion

Overview: This intervention strengthens and extends the Council's existing digital inclusion webpage – Haringey Gets Digital – into a jointly owned, accessible information hub that supports consistent signposting, clearer communication, and improved coordination across the system.

The hub would be co-developed and co-maintained by the Digital Inclusion Team and key VCSE partners (e.g. Haringey Reach & Connect, Public Voice, Haringey Community Collaborative), ensuring it reflects real resident needs and frontline experience. It would provide clear, jargon-free information on available support, supplemented by non-digital access routes (e.g. phone numbers, physical locations, opening times) to ensure inclusivity for residents who remain offline.

A core feature is improved language accessibility, including translated content and simplified formats, addressing known barriers for ESOL communities. Internally, the intervention would be reinforced through guidance and prompts on the Council intranet, supporting staff to adopt consistent, accessible communication standards when describing digital services.

This positions the hub not just as a static webpage, but as a shared system infrastructure, supporting navigation, coordination, and continuous improvement through iterative engagement mechanisms with VCSE partners.

Potential Delivery Model

- Haringey Council Digital Inclusion Team leads delivery in partnership with relevant VCSE stakeholders, who co-develop content and support ongoing updates; Council teams embed accessible communication standards via intranet guidance; VCSE partners actively use and promote the hub in frontline signposting and provide feedback to the Council for continuous improvement.

Target Behaviours

- Council staff use clear, jargon-free and accessible language when describing digital services and support.
- Residents and organisations access the digital inclusion hub for guidance, including non-digital access routes.
- VCSE organisations consistently redirect residents to the hub as a primary signposting tool.
- VCSE partners contribute feedback and updates to maintain relevance and accuracy.

Beneficiaries

- Primary: Older residents seeking information on digital and non-digital support
- Secondary: Council staff, VCSE organisations, and frontline services providing guidance to residents

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "HC Teams create systems and pages that are accessible" (Cluster 1: Digital-by-Default Systems / Council Services)
- "HC Teams unclear definition of what accessible in this context looks like" (Cluster 1: Digital-by-Default Systems / Council Services)

- "All HC Council Teams need to de-jargon digital support offer" (Cluster 1: Digital-by-Default Systems / Council Services)
- "Haringey Reach & Connect directs people to the right websites" (Cluster 3: Receiving Support, Cluster 4: Information Flows and Translation)
- "Haringey Over 50s Forum signpost to targeted support" (Cluster 3: Receiving Support, Cluster 4: Information Flows and Translation)

Readiness Score

- 3 - High Readiness

This intervention addresses key system gaps around fragmented information flows and inconsistent communication, identified across the Behavioural System Map. It primarily targets COM-B opportunity barriers (e.g. older residents not knowing where to go) by creating a clear, trusted, and widely used entry point into the system.

By working closely with VCSE partners, it strengthens coordination in a landscape currently characterised by overlapping provision and limited alignment, while also creating an iterative engagement mechanism between frontline delivery and service design. The inclusion of non-digital pathways and language accessibility ensures the hub supports rather than aims to correct in-person preferences.

Strategically, it acts as an enabling infrastructure for other interventions, improving system navigation, reducing duplication, and increasing the visibility and coherence of the overall digital inclusion offer.

About the Readiness Score

The readiness score assesses the extent to which the intervention can be implemented:

1. Low readiness - No clear owner, design and development required, and early engagement necessary.

2. Moderate readiness - intervention is feasible and grounded in existing assets, but requires piloting, scalability testing and refinement.

3. High readiness - ready to be tested with target groups and refined where necessary, near implementation, with low barriers and low risk profile for implementation.

The readiness score is further defined in the methodology section.

Key risks include:

- Risk of information becoming outdated without clear ownership and resourcing for regular updates and maintenance
- Reliance on sustained engagement from VCSE partners to co-maintain and actively use the hub
- Potential digital access barriers for the most digitally excluded residents (requiring non-digital promotion and use of offline channels)

Intervention 2: Digital Inclusion Insights and Coordination Network

Overview: This intervention establishes a structured, cross-sector insight-sharing network to systematically capture and use frontline intelligence on residents' digital challenges. It formalises existing but fragmented feedback channels between council teams and VCSE organisations, enabling the Digital Inclusion Team to design support that is grounded in real needs of older people in the neighbourhood.

The network would bring together council teams and organisations working with older residents, particularly HC Adult Social Care, Public Voice, Haringey Reach & Connect, Haringey Over 50s Forum, Old Alone Haringey, as well as other locally active VCSE organisations in Noel Park and West Green. Participation would prioritise organisations with direct resident contact, while remaining open to wider stakeholders where relevant.

A core feature is the integration of language accessibility and multilingual needs into insight collection, ensuring that barriers faced by non-English speakers are consistently captured and addressed. Insights would be shared through regular meetings and simple reporting templates, and used to iteratively improve communications, training, and resources (including Intervention 1: The Digital Inclusion Hub).

Potential Delivery Model

- Haringey Council Digital Inclusion Team convenes and coordinates a defined network of council services (e.g. Adult Social Care and Financial Support) and locally active VCSE partners and other organisations operating in Noel Park and West Green; partners contribute insights via regular meetings and simple reporting templates; outputs will then be synthesised by the HC Digital Inclusion Team and fed into service design.

Target Behaviours

- Council teams regularly share structured insights about residents' digital barriers (including language and accessibility needs)
- VCSE partners contribute frontline observation from their interactions with older residents on what is and what isn't working by regularly participating in network meetings
- HC Digital Inclusion Team actively use shared insights to shape support offers, communications, and any training materials

Beneficiaries

- Primary: Older residents accessing digital support services (particularly those facing complex or language-related barriers)
- Secondary: Council teams and VCSE partners who deliver support

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "HC Adult Social Care Team shares insights with DI Team" (Cluster 1: Digital-by-Default Systems / Council Services)
- "Public Voice gives feedback to the Council on problems residents are facing" (Cluster 1: Digital-by-Default Systems / Council Services)

Readiness Score

- 2 (Moderate Readiness)

This intervention addresses a core system weakness: limited coordination and information flows across a dense network of providers. It targets COM-B reflective motivation and psychological capability at the system level by enabling organisations to better understand resident needs and adapt their behaviour accordingly.

By formalising insight-sharing, it creates an iterative engagement mechanism that improves the relevance and accessibility of digital inclusion interventions, including communications (e.g. jargon reduction, multilingual provision) and service design. It also strengthens relationships between Actors, helping to reduce duplication and identify gaps in provision within a complex service landscape.

Strategically, the network builds system capacity over time; positioning VCSEs as trusted insight-sharing partners and creating a foundation for broader collaboration, including joint funding opportunities and expansion into other priority areas.

Key risks include:

- Limited incentives for VCSE organisations (particularly those not primarily focused on digital inclusion) to participate consistently;
- Risk of low engagement or drop-off over time as a result of existing coordination challenges across the system;
- Capacity constraints within HC DI Team to convene, manage and synthesise network activity; and,
- Need for a clear definition of functions and geographical locations of participating organisations.

Intervention 3: Research and Engagement on Older Residents' Preferences for In-Person Services

Overview: This intervention generates deeper, actionable insight into older residents' preference for in-person services, addressing a critical evidence gap identified in the Behavioural Systems Map. It acts as a precursor to further intervention design, moving beyond high-level system mapping to explore the underlying Drivers of behaviour in more detail.

Building directly on the map, engagement activities would focus on testing and unpacking hypothesised Drivers (e.g. fear of scams, desire for social interaction, low confidence, system complexity) rather than re-exploring known surface-level preferences. Narrative and participatory methods - such as facilitated storytelling, scenario-based discussions, and problem-mapping exercises - would be used within existing community settings (e.g. Haringey Over 50s Forum groups) to elicit lived experiences and decision-making processes.

Delivery would prioritise in-person, accessible formats, with targeted inclusion of ESOL residents through translation support and trusted intermediaries. The outputs would provide a more granular understanding of barriers and motivations, directly informing the design of digital services, communication strategies, and support models.

Potential Delivery Model

- Haringey Council Digital Inclusion Team collaborates with internal data and insights colleagues to design and coordinate the research, and works with Haringey Over 50s Forum and other selected VCSEs operating in the area to deliver in-person engagement sessions; insights are synthesised and fed into subsequent research and intervention design (e.g. future resident-focused BSM workshops).

Target Behaviours

- Older residents participate in structured, in-person discussions exploring their experiences of digital versus in-person services;
- Locally operating VCSE partners facilitate and share nuanced insights on residents' barriers, motivations and preferences; and,
- Council teams actively use findings to refine digital inclusion strategies, service design and communications.

Beneficiaries

- Primary: Older residents with in-person preferences.
- Secondary: Council teams and VCSE organisations designing and delivering digital inclusion interventions.

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People preference for in-person services" (Cluster 2: Accessing Digital Services, Cluster 3: Receiving Support)

Readiness Score

- 3 (High Readiness)

This intervention addresses a central gap in the system: the lack of robust, behaviourally grounded understanding of why in-person preference persists in this neighbourhood. It targets COM-B reflective motivation (beliefs, fears, social norms) and psychological capability (understanding of digital systems) by uncovering the Drivers shaping engagement decisions.

By explicitly building on hypotheses generated through the Behavioural System Map, it ensures that research is focused and avoids a mere duplication of existing insights but instead builds on them to inform effective intervention design. The findings will enable more precisely targeted interventions, particularly in areas such as communications and service accessibility.

Strategically, this intervention strengthens the evidence base for future interventions and creates a foundation for iterative, resident-centred design. It also offers potential to extend into deeper participatory approaches (e.g. resident-focused BSM workshops), enhancing long-term responsiveness and legitimacy.

Key risks include:

- Risk of generating further superficial findings (i.e. a simple restating of preferences for in-person) if engagement methods are not carefully designed to probe underlying motivations;
- Stakeholder and resident engagement fatigue if this research appears to duplicate previous efforts; and,
- Sampling bias (overrepresentation of more engaged or vocal residents, underrepresentation of ESOL groups, more digitally excluded or otherwise isolated residents).

Reflections

Benefits

Haringey participants reflected the following benefits from the trial:

- BSM built a shared and timely understanding of digital inclusion that then emerges at the neighbourhood-level. This included reflecting the complexity and scale of the challenge. However, it was sometimes difficult to keep ideas focused on the neighbourhood-level as existing services were not always directly located there.
- BSM supported exploration and understanding of complexity, with a methodical approach: The BSM method was beneficial in effectively breaking down complex processes into manageable steps for participants and stopping the jump ahead to solutions. It also requires the challenging of assumptions, such as asking "why" multiple times to get to the root causes.

  This worked especially well in-person, where broader points could still be captured but 'parked', whilst the group was kept focused on the specific Actor-Behaviour-Connection-Driver (A-B-C-D) structure. To further improve, participants thought examples of prior final outputs, such as the final maps, would be helpful for future participants to trust the process and the rationale behind the separation and focus on each of the A-B-C-D elements in turn.

- BSM enabled participants to understand assets and resources already in place: Workshop 1 helped participants build shared understanding as it focused on building up the understanding of what already existed and where. To further improve: further pre-workshop discussion, information gathering and collaboration would benefit as it would establish a baseline understanding of the current state.

- Participation built stakeholder knowledge of the method: The BSM workshops were well-paced and highly informative, where participants gained understanding of the BSM approach. Some participants also felt their understanding and contributions were able to increase over time. This was supported by skilled facilitation, to keep the participant group focused on the task and stage at hand - especially as it is natural to 'jump ahead' - and to adeptly answer questions as they arose.
- The behavioural models behind the approach help the 'stepping back' and consideration of whether people have the capability, opportunity and motivation to make changes. Where this is tested, reviewed and re-tested, it is seen as a robust framework.
- BSM supported increased understanding of digital inclusion Behaviours and Drivers for both individuals and organisations. Understanding the large number of people, factors, and barriers involved in addressing digital inclusion also meant there was a need to revisit the objectives at the neighbourhood level, which can be challenging when broader ideas emerge.
- The capacity building workshop was valuable and learning materials and summaries from this would be useful for wider teams or when working and communicating with other partners. The meetings that brought together different areas were useful, and would continue to be, to understand what others have found and what works well.

Learning

A learning that came through the process was the value of framing the challenges as one of 'digital *exclusion'*. This aligns with the systems approach, as it can put more onus and responsibility on organisations and the deployment of resources to change.

A learning for future applications is the usefulness of upfront coordination and planning between different parts of a council or across participating organisations/ stakeholders. This is to align expectations before the workshops e.g. on what will be covered, who will attend, and the outline roles and responsibilities through the project.

Haringey Council participants identified the necessity and value of having a step-by-step guide that also documents the process between workshop stages, to clarify the approach to the 'background work', for future application of the methodology. The guide could also have easy to use checklists for different stages and application examples.

Overall, there is a recognition that assessing how well the BSM approach works will require time to understand how well the map and its interventions reflect on-the-ground experiences; if interventions are feasible; and how effective they then are.

Limitations - and recommended improvements

Haringey participants reflected that there are several limitations to be mitigated for future BSM projects:

- BSM is not a rapid process but requires time and resources for full engagement. Participants reflected that the timeline for the project was very tight and this limited some of the group's ability to reflect and contribute between workshops - an important activity when dealing with new concepts, new tools, and with a 'test and learn' objective.
- More time for preparation and to improve outputs: more time would have enabled more effective planning, creating the structure, identifying necessary participants, and securing commitments in advance. More time in planning would have also allowed for more engagement with residents.
- Representation levels limited data richness: There was some limited representation in the workshops, with some organisations not being represented or not consistently so. This was partly due to logistical challenges with the project's constrained timeline limiting upfront planning and ability to schedule across different organisations and commitments. These gaps in representation

impact and bias the development of the map, where the presence of other important Actors in the workshops may have brought other insights into the BSM development. A particular gap was voices from people who work directly with the target populations, especially those from Haringey's diverse communities and clients who have English as a second language. An improvement here would be clear communication on workshop content and the meaning and value of the participation can help bring in more stakeholders.

- This application of BSM did not necessarily answer a specific upfront question about why a particular cohort was not engaging digitally, and the final map was less specific to the neighbourhood. The method tended to broaden the question and, with the stage Haringey was at, created a general but valuable picture. More defined initial questions may help keep a specific neighbourhood focus.
- Resident perspectives were seen to be essential and would have been beneficial both at the start: to understand local challenges noted in the survey and other existing data - and then after the BSM process to test and implement ideas.
- Mapping complex systems creates a complex diagram. Stakeholders considered the final map to be overwhelming and complicated to explain to others. This may require guidance on how to break down the overall map and communicate it to those who were not participants.

There was also interest in whether there could be adapted versions of BSM that are less time-intensive. These would need to have clear guidance and identification of when specific 'fast-stream' or 'light-touch' adaptations are suitable to be brought into current processes. One suggested adaptation was whether Actors and Behaviours could be combined in the first instance, as this happens naturally, and then reviewed as individual elements. The full separation of Actors and Behaviours takes time, as there is a large listing exercise before each Actor is revisited to identify their behaviours.

Overall, the funding timeline limited the ability to plan, implement, complete, and report on an experimental research project effectively.

Next steps

The current outcomes of the project are seen as a starting point and not an end point, where there is now an opportunity to refine and test to deliver effective interventions. In some formats, the mapping output itself can be a useful resource to see the bigger picture and connections to inform next steps.

Haringey Council reported interest and confidence in taking the BSM methodology forward, across different neighbourhoods and looking to understand different aspects of digital inclusion. Guidance is required to do so, and will be utilised by the Digital Inclusion team in work with colleagues and community partners.

The independent facilitator role as well as the presence of a 'neutral' or 'external' observer 'in the room' was highlighted as being critical to effectively guide the BSM activity and objectively capture and feedback the discussion points.

There is also interest in communicating the process and outputs of the mapping process across stakeholder groups, to drive conversations around actions that may be undertaken to support digital inclusion work across the borough. Guidance and examples would be useful for ensuring this communication is effective.

It was noted that the method may also be applicable to other domains beyond digital inclusion.

Finally, there is a strong appetite to remain engaged with other trial boroughs and neighbourhoods, to share learning and update and improve methods - including exploring where gaps or challenges emerged and collaborating to address them.

Eyres Monsell Estate and Gilmorton Estate

Overview

Eyres Monsell and Gilmorton Estates are two estates in the city of Leicester; their key demographics are listed below.

Eyres Monsell Estate:

- **Population:** 11, 155 people.
- **Age:** Residents aged 60+ make up 20.6% overall
- **Ethnicity:** 80.6% of people of White ethnicity, 7.0% of Black, Black British, Black Welsh, Caribbean or African ethnicity, 6.8% of Asian, Asian British or Asian Welsh ethnicity and 5.6% are of mixed, multiple or other ethnic groups.
- **Household composition:** 31.9% of households are one person households
- **Health and wellbeing:** In 2021, most residents (82.2%) reported good or very good health while the remaining were in fair (12.7%), bad (5.9%) or very bad health (2%). Fewer (23.5%) residents have a disability and 9% identify as an unpaid carer.
- **Deprivation:** 34.8% of households are deprived in one dimension, 23.3% in two, 9.6% in three or more.

Gilmorton Estate:

- **Population:** 1, 388 people.
- **Age:** Residents aged 60+ make up 22.7% overall
- **Ethnicity:** 71.6% of people of White ethnicity, 8.0% of Black, Black British, Black Welsh, Caribbean or African ethnicity, 14.5% of Asian, Asian British or Asian Welsh ethnicity and 5.9% are of mixed, multiple or other ethnic groups.
- **Household composition:** 29.6% of households are one person households
- **Health and wellbeing:** In 2021, most residents (79.1%) reported good or very good health while the remaining were in fair (15.1%), bad (4.4%) or very bad health (1.5%). Fewer (19.5%) residents have a disability and 9.8 identify as an unpaid carer.
- **Deprivation:** 37.5% of households are deprived in one dimension, 16.1% in two, 8.1% in three or more.

Digital inclusion challenge

Work by the Leicester City Council (LCC) team highlighted a potential challenge for people aged 60+ on Eyres Monsell and Gilmorton estates being able to utilise digital tools and services to meet their daily needs. The LCC Public Health programme Let's Get Digital is active across both neighbourhoods and has previously funded community outreach to drive engagement with NHS online, but partners insights and work by the stakeholder group highlighted potential behavioural and attitudinal barriers to for the cohort.

LCC selected this neighbourhood to focus on two of the eight the DSIT Digital Action Plan Priorities:

- B. Breaking down barriers to digital services
- D. Building confidence and supporting local delivery

A key part of the engagement for this work was to explore through BSM the Drivers of attitudes including feelings of being too old to learn digital skills and low confidence and skills in using online services for older people. Both neighbourhoods also benefit from established relationships with local third sector partners which are active across the area.

LCC and the Leicester and the Leicestershire Enterprise Partnership (LLEP) undertook this work as part of its broader digital inclusion strategy to gather insights to support future policy and project design. This work was intended to build on survey insights gathered in 2024 exploring digital inclusion impacts. BSM was undertaken to explore in detail for the selected neighbourhoods how the target cohort can be supported through work across the local skills and health system.

Synthesis summary

The following sections present detailed analysis and insights of BSM and resulting intervention blueprints, as well as complimentary geospatial analysis and community engagement. Commonalities and differences between methods are explored in the Findings section.

This summary presents what emerged across these methods through the synthesis approach that is detailed in the methodology section above:

- **Digital exclusion in Eyres Monsell and Gilmorton is shaped by psychological barriers as well as by access or skills gaps.** BSM suggests that confidence, anxiety, shame, and beliefs that technology is 'not for older people' may be central to how older residents engage with digital tools and services. Spatial analysis reinforces capability as the strongest area-level barrier, but the map adds important behavioural depth by showing how these barriers translate into avoidance, delayed action, and reluctance to seek help.
- **Skills support is central to the system, but current provision may not align with how older people can or want to learn.** BSM places training and learning at the centre of the local digital inclusion system, but highlights a mismatch between structured courses and preferences for flexible, low-pressure, problem-solving support. Spatial analysis supports this emphasis through low adult education and training levels and low digital propensity, suggesting that capability is a key barrier, while BSM points to a need for support that is tailored to different stages, motivations, and learning preferences.
- **Affordability may be a more significant system constraint than the local support landscape alone suggests.** BSM highlights trusted assets such as Pork Pie Library, Eyres Monsell Community Centre, and the Let's Get Digital programme as important mitigations for device and connectivity barriers. However, spatial analysis shows affordability as a major compounding factor across both estates, suggesting that reliance on a small number of supportive local assets may partially mask the extent to which the cost of devices, data, and services continues to constrain digital engagement - particularly for those who have accessibility barriers to those spaces.
- **Support pathways are trusted but characterised by limited coordination and inconsistent signposting, reducing their effectiveness.** BSM identifies

a range of valued community and council actors, but also shows confusion about roles, referrals, and who provides what support, creating friction for residents and providers alike. This is especially important in a system already shaped by limited capacity and dependence on a small number of key people, pointing to a need for clearer, more consistent information pathways across organisations.

- **Health and wellbeing may offer a promising entry point into digital inclusion, but this route remains underdeveloped and is not yet clearly understood.** BSM suggests that social and health-related settings could provide trusted, low-pressure routes into digital learning, especially where support is embedded in wider wellbeing activity rather than framed narrowly as skills training. This is a notable opportunity because the system objective links digital inclusion to isolation and wellbeing, yet without resident engagement it remains unclear which health and social entry points older residents themselves would find most relevant or motivating.

Behavioural Systems Map

System Objective

In Workshop 1, the core participant group jointly established the following system objective:

Our goal is to improve digital inclusion of older people on the Eyres Monsell & Gilmorton Estates in a way that addresses wider issues of isolation, while also recognising gaps in our understanding of how older residents currently use technology, their reliance on family and friends for online tasks, and the impact of lower educational attainment in the area.
This involves:

- Enabling older people to access essential online services independently and confidently;
- Building social connection and reducing loneliness via digital inclusion as a way to bring people together;
- Understanding real patterns of technology use and avoiding assumptions; and,
- Developing continuous and sustainable solutions that deliver lasting change.

Overview

BSM with workshop participants revealed a system in which digital exclusion is driven by a combination of psychological barriers surrounding confidence, anxiety, and identity, as well as capability and skills gaps, and structural challenges, including fragmented support, limited coordination, and resource constraints.

A central dynamic across the system appears to be a reinforcing cycle of avoidance: negative digital experiences for older people, in particular those where follow-up is not immediate or visible, reduce confidence, confirm prior beliefs, and increase frustration; leading to disengagement from services and missed opportunities to build skills. At the same time, workshop participants highlighted that the system contains strong assets - notably trusted community spaces like the Eyres Monsell Community Centre, the Eyres Monsell Club for Young People, and Pork Pie Library, plus an extensive existing training provision

through the Let's Get Digital programme - which workshop participants believed are not yet fully connected or optimised.

The mapping process also highlighted important systemic gaps: inconsistent insight into the support needs of older people, limited coordination between organisations, and a misalignment between service design (e.g. with regard to digital skills courses) and the specific preferences of older people.

Overall, the map reveals an opportunity in shifting from a fragmented, supply-led model to a more integrated, resident-centric system that continues to build on trusted local assets but also recognises and takes into account specific barriers and enablers for older people to ultimately create clear and consistent pathways into digital engagement and skill development.

The full Behavioural Systems Map is accessible on the project website.

Cluster analysis

BSM revealed 6 clusters for the Eyres Monsell Estate and Gilmorton Estates digital inclusion system:

Cluster 1: Strategy and Influencing

This cluster illustrates the overall direction of digital inclusion efforts in the neighbourhood, but is currently constrained by limited insight flows and competing priorities.

The mapping showed that LCC services can design digital inclusion strategy based on inputs from Housing and Neighbourhood Services alongside advocacy from local councillors; all of whom work directly with residents. However, workshop participants noted that insights on digital exclusion are often deprioritised, which creates a negative reinforcing cycle between frontline engagement and strategic design that limits the responsiveness of programmes such as Let's Get Digital.

It was highlighted that understanding across teams of who is digitally excluded and why is inconsistent, which is compounded by limited capacity, budget, and fragmented knowledge of roles across different council teams and community organisations.

Overall, this cluster reveals a key opportunity: strengthening data-sharing and insight generation to create a more adaptive and targeted digital intervention strategy, particularly by embedding learning about behavioural barriers into digital skills programme design.

Cluster 2: Accessing Services

This cluster captures how behavioural barriers can translate into disengagement from essential services, reinforcing digital exclusion over time.

The mapping showed multiple behavioural pathways when older people encounter digital barriers: postponing tasks, avoiding services altogether, or attempting access once and then disengaging either due to an inability to troubleshoot or a lack of visible follow-up from digitally accessed services. Crucially, these Behaviours are not isolated but form a reinforcing cycle of avoidance and reduced confidence.

Workshop participants furthermore highlighted a dense set of interacting Drivers, including low trust in council services, lack of awareness of support pathways, language and literacy barriers, and a fear of scams (often reinforced by stories shared by their peers or the media). Psychological factors are particularly salient in the map: anxiety, low confidence, and a desire to appear capable and shame around low digital capabilities can prevent individuals from seeking help and thus further suppress engagement with essential services.

Importantly, system design was recognised as a contributor to these dynamics - when online services do not provide clear responses or feedback, they reinforce existing perceptions that digital channels are unreliable or 'not for older people'. Consequently, this cluster highlights a critical bottleneck: without trustworthy entry points to the digital service system and responsive, visible follow-up to support requests, older people may be pushed towards persistent avoidance.

Cluster 3: Community Support

This cluster represents the local support infrastructure, which is valued and trusted but faces both capacity and capability challenges.

The mapping process surfaced a range of community-based Actors and assets (e.g. the Eyres Monsell Community Centre, Pork Pie Library and its Friendship Group, LCC STAR, and social prescribers) that provide informal and ad hoc digital support. These settings are often trusted, familiar environments; however, support appears not to be systematically coordinated or matched to specific digital support needs.

Limited staff capacity and lack of specialist digital expertise were considered challenges that meant support providers become overwhelmed, while inconsistent knowledge of 'who does what' may also lead to inappropriate or missed referrals. Together, this creates additional friction in the system and weakens the effectiveness of existing support pathways.

In addition to this, workshop participants also highlighted spatial and social dynamics in the neighbourhood. Support appears to be concentrated around Eyres Monsell, with less visibility of assets in Gilmorton - an imbalance participants recognised as potentially self-reinforcing. Meanwhile, Eyres Monsell Club for Young People is a trusted local hub both for information and signposting older people to support as well as providing a space for social connection; however, its name may unintentionally deter some older residents and the fact that it is run by local people may interact with historic tensions between Eyres Monsell, Gilmorton, and the adjacent Saffron neighbourhood in ways that affect who feels welcome.

In summary, this cluster underscores the opportunity to better connect and formalise community support pathways while preserving their trusted, familiar nature and addressing important spatial and social dynamics.

Cluster 4: Training and Learning

This cluster illustrates the primary mechanisms for building digital capability, but current provision may not fully align with older people's needs or motivations.

Mapping participants highlighted the central role of the LCC Adult Education Team and in particular the Let's Get Digital programme in delivering structured training, including courses on using essential digital tools such as the NHS app. However, low attendance emerged as a key issue, driven by both system- and individual-level barriers.

On a system level, workshop participants noted that course formats often do not match user preferences: sessions are scheduled too far in advance or at inconvenient times, and there is a mismatch between structured courses and a preference for informal, drop-in problem-solving. Limited follow-up provision further reduces skill retention, weakening the pathway from initial engagement to sustained capability. A perception from institutional Actors of older people as having unlimited free time and availability and a failure to recognise and take into account their rich social lives was highlighted as an important issue affecting digital skills course design for older people in particular.

From an individual level, several important psychological capability and motivational Drivers underpin engagement. The mapping process surfaced negative perceptions of formal learning environments, beliefs among older people that 'technology is not for them', age-related issues around memory and skill

retention, as well as a resistance to age-labelled services due to a lack of self-identification as an older person. At the same time, it was noted that there is clear latent motivation to learn digital skills, particularly when digital skills are linked to meaningful outcomes such as maintaining social connections.

This cluster reveals a key leverage point: redesigning training to be flexible, contextualised, and socially embedded could significantly increase engagement and impact.

Cluster 5: Devices

This cluster reveals how device access and connectivity are gateways to several parts of the system, but are constrained by affordability, complexity, and knowledge gaps.

The mapping showed that access to devices and connectivity is a foundational enabler for digital inclusion, underpinning skills development, service use, and, to a degree, social connection. However, mapping participants believed that financial constraints were a primary barrier, limiting the ability of older people to acquire appropriate devices or maintain connectivity.

Beyond affordability, workshop participants also emphasised capability-related barriers: lack of knowledge about which devices meet individual needs, confusion around terms and conditions, and difficulty keeping up with rapid technological change; these factors not only create hesitation around purchasing and using devices but also increase vulnerability to poor purchasing decisions or exploitation by bad faith Actors.

Community assets partially mitigate these barriers. Eyres Monsell Community Centre provides free Wi-Fi, Pork Pie Library offers free access to PCs on-site, and the Let's Get Digital programme also includes device provision as part of their courses. However, workshop participants reflected that these provisions may not cater to those with mobility issues or those who lack foundational digital skills.

Overall, this cluster highlights both a bottleneck and an opportunity: improving guidance and simplifying access to appropriate devices could unlock engagement across multiple parts of the system.

Cluster 6: Health and Wellbeing

This cluster connects digital inclusion to broader health and wellbeing outcomes, which are presented as both a Driver and an entry point for digital engagement.

The mapping showed that digital exclusion is closely linked to loneliness and isolation, while digital access – particularly via online communication tools like social media – may strengthen social connection among older people with their families and friends. Importantly, workshop participants reframed community activities (e.g. day trips organised by the Pork Pie Library Friendship Group or events at Eyres Monsell Club for Young People) not just as outcomes, but as opportunities to embed digital support in low-pressure, social contexts: relaxed, familiar environments may be conducive to learning digital skills prior to 'crisis moments' in which digital skills are a necessity to access essential services.

On the healthcare side, Actors such as Sturdee Road Health and Wellbeing Centre and Pasley Road Health Centre and their associated social prescribers play a role in identifying and supporting digitally excluded individuals. However, the mapping workshops highlighted ambiguity as to their remit, with support often dependent on individuals already accessing services, and delays in escalation and unclear pathways further weakening this route towards digital inclusion.

Together, these factors point towards a significant opportunity: leveraging health and wellbeing touchpoints as proactive, trusted entry routes into digital inclusion, rather than relying on reactive engagement.

Geospatial analysis

Geospatial analysis revealed that in Leicester, residents experience mixed levels of digital exclusion. There are pockets where digital exclusion is more severe – 7 LSOAs in total, one located within our selected neighbourhood areas – Gilmorton and Eyres Monsell estates. The selected neighbourhoods are located in the south of the borough and are indicated in all maps by a thick black boundary.

The proxy risk of digital exclusion (Figure 20 Map A) within Gilmorton and Eyres Monsell estates also varies with the lowest score being 0.39 and the highest 0.79.

About the Index and methodology

Analysis was conducted at the OA and LSOA levels at 2 layers:

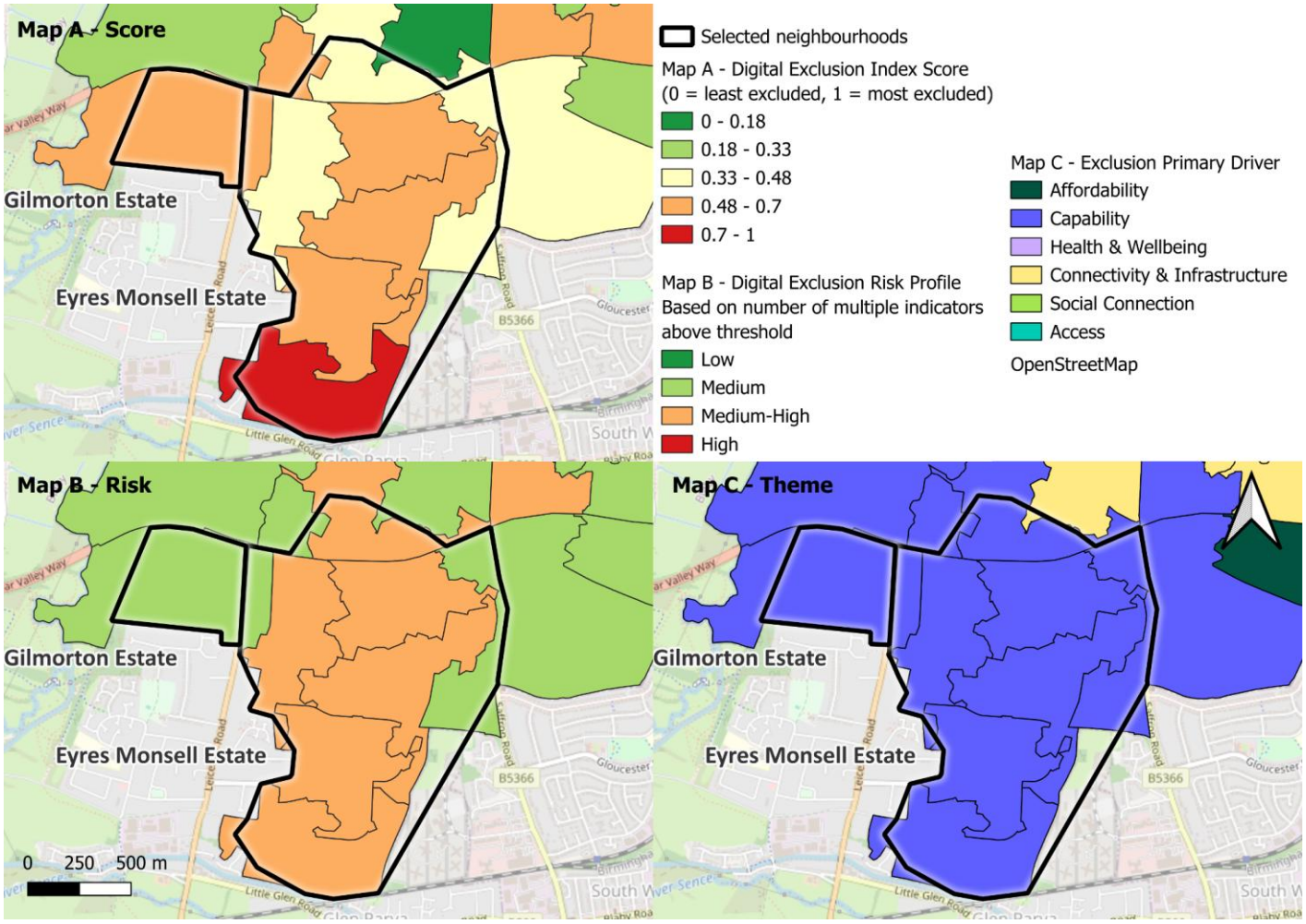
Layer 1 (Quantitative) - aggregated national datasets including the 2021 Census and the Index of Multiple Deprivation (IMD).

Layer 2 (Contextual) - local information such as key assets and additional open-source datasets such as English proficiency.

Digital Exclusion Index proxy Indicators (layer 1):

Income deprivation (aged 66+), lives alone (aged 65+), broadband speed, long-term disability, digital propensity, adult skills, geographical barriers to services, EAL.

Figure 20: Digital Exclusion Index Map Outputs



Alongside a digital exclusion score, the two neighbourhoods have risk profiles (Map B in Figure 20). In Gilmorton estate, the risk profile is medium, which means that most indicators have a low scoring in the neighbourhood. A few residents in Eyres Monsell estate could experience a medium risk too but most are

likely to experience a medium-high risk of being digitally excluded. These risk profiles might look slightly different if the data was strictly exploring the 60+ aged demographic.

In our selected neighbourhoods, the proportion of residents aged 60+ per LSOA varies between 8.2% and 21.3%. Therefore, when a variable is not directly measuring older populations by definition, it would be influenced by 8-20% of older people and the remainder would be those aged <65. Very few older people live by themselves and the proportions of adults with a long-term health condition or a disability that affects their day-to-day tasks a lot are also low across the neighbourhoods. These two variables might be pulling the index to show a lower score.

Multiple barriers might be driving the risk of digital exclusion (see Table 8 - bold). The ageing in place classification, which analyses people aged 50+ exclusively, categorises most of Eyres Monsell Estate as "Disadvantaged Single Households" with pockets of "Struggling White British". Gilmorton Estate is categorised fully as a "Constrained Semi-Rural Ageing and Retirement" area.

Data shows that adult education and training levels (an IMD domain) is a driver with significant presence in all LSOAs within the two neighbourhoods. LCC reported challenges in previously trying to engage residents in learning and digital inclusion activity, which links to some of the prevalent barriers here like residents' likelihood of using technology (see the Digital Propensity Index - DPI), potential financial concerns and the concentration of low education and training levels. The Ageing in Place Classification confirms that residents aged 50+ from areas like Eyres Monsell and Gilmorton estates typically have lower education levels and are the least likely to engage digitally while having the highest capacity for in-person, civic engagement. Residents of this group also typically travel longer distances to access local assets.

Table 8: Index domains and their indicators (most prevalent are bold)

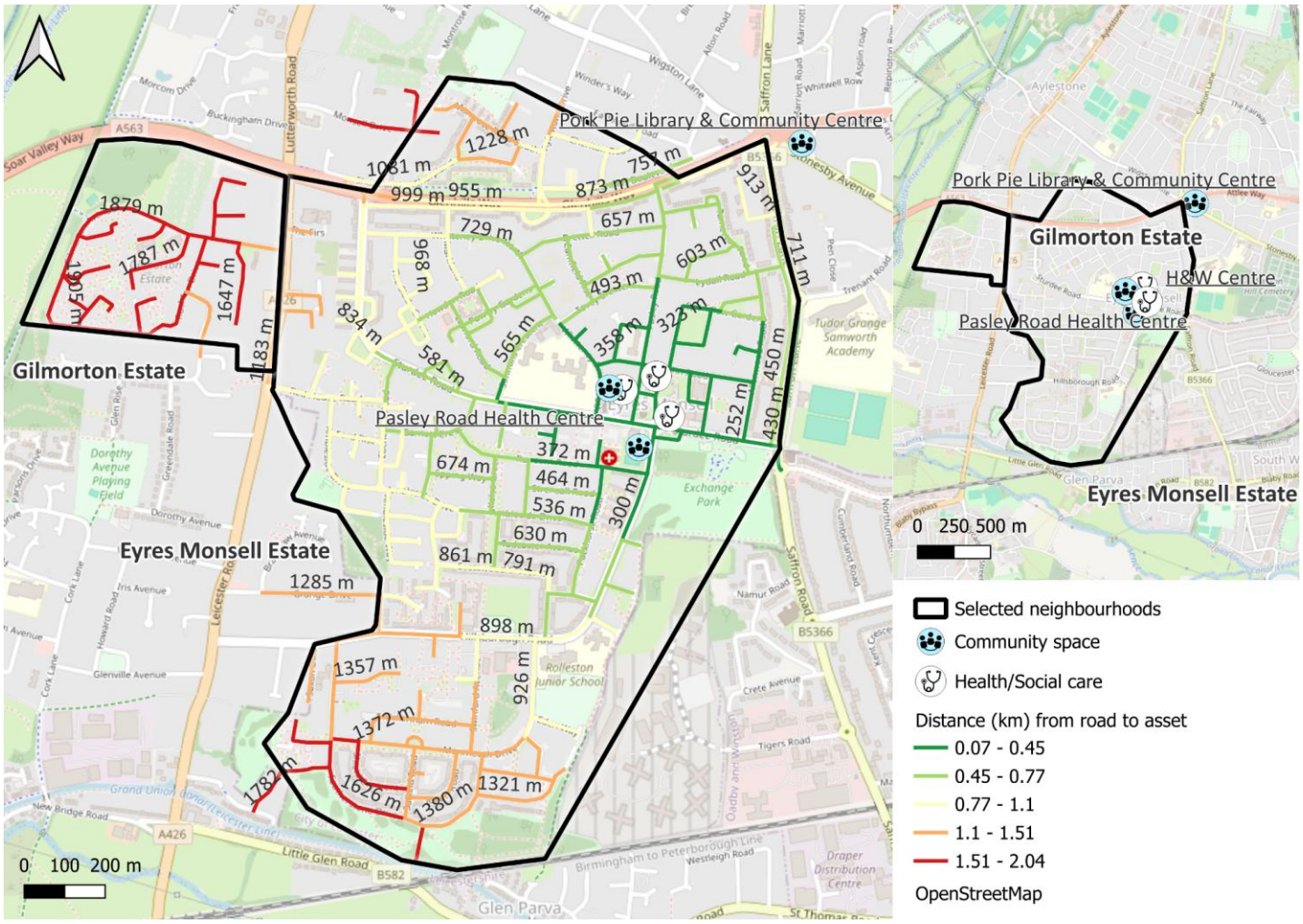
Domain	Indicator(s)
Affordability	**Income Deprivation Affecting Older People Index (IDAOPI)**
Capability	**Digital Propensity Index (DPI)**
	Adult Skills IMD sub-domain (literacy and maths skills)
Access	Geographical Barriers to Services sub-domain
Social connection	Proportion of one-person households aged 65 and over
	English as a Second Language (cannot speak and cannot speak well)
Health & wellbeing constraints	Disability prevents day-to-day activities a lot
Connectivity & infrastructure	Broadband coverage and performance (residential)
	Superfast broadband (SFBB) availability – 'UK Standard' or threshold for modern life

<u>Neighbourhood Assets</u>

. Overall, residents at Eyres Monsell Estate have better accessibility to all assets as they are mostly located within a walking distance (<800m) - see Figure 21. However, those to the south of Eyres Monsell and those in Gilmorton experience a distance of 1,500m and 2,000m to key assets, above what is considered a typical walking distance. Some assets may appear close but are actually challenging to walk to, for example the

Pork Pie Library is located on the other side of the B5366 ring road, which can make the walk less accessible for residents.

Figure 21: Street walkability to key assets



Broadband connectivity

Broadband connectivity is an important digital inclusion factor. A broadband speed of <10mbit/s is considered slow per modern life standards as it is limited to use on a single device only and for more basic tasks including searching the web. Multiple pockets of broadband speed of <10mbit/s exist in the selected estates but the lowest average download speed is recorded in Gilmorton Estate (in 3 out of 4 OAs).

Overall, the spatial analysis suggests that when older people at Eyres Monsell and Gilmorton Estates experience digital exclusion, it is likely to be driven by capability, connectivity and infrastructure barriers, affordability and in parts distance to key assets. Low levels of adult education and training skills have been identified as the most significant barrier, followed by affordability, and the likelihood of using technology. This could suggest that the cost of devices, data and digital services can be challenging for this community. This together with lack of necessary skills and adequate broadband speeds can have significant impact on residents' digital inclusion levels. Physical distance to assets and internet speed are also of significant presence in parts of the estates. This could link to exclusion from day-to-day tasks and connection opportunities and ultimately digital exclusion.

Eyres Monsell and Gilmorton neighbourhood geospatial analysis key findings:

- **Variable risk profiles:** Digital exclusion risk is mixed across the selected estates, with Gilmorton showing a medium risk and Eyres Monsell largely showing a medium-high risk.
- **Low Engagement and Capability Barriers:** The most significant driver of digital exclusion for Eyres Monsell and Gilmorton is a lack of capability, evidenced by low levels of adult education/training and a low Digital Propensity Index. Residents are the least likely to engage digitally, despite having a high capacity for in-person civic engagement.
- **Affordability constraints:** Financial difficulty is a major compounding factor. The cost of devices, data, and digital services is a significant barrier for this community, directly impacting their ability to access key services online.
- **Unequal physical access to assets:** Walkability to key community assets varies significantly. While northern Eyres Monsell residents are within a standard walking distance (<800m), those in southern Eyres Monsell and Gilmorton face walks of 1,500m to 2,000m.
- **Inadequate Broadband Infrastructure:** Slow residential broadband speeds (<10mbit/s)—which only support basic, single-device usage—are prevalent in multiple pockets across both estates. On the Gilmorton Estate 3 out of 4 Output Areas record these low average download speeds.

Community engagement

There was strong consensus from stakeholders on the value of hearing from residents, including on the digital uses, skills and learning formats that could be of interest to them. However, community engagement was a challenge given the project timescale. Accessing resident groups requires careful and appropriate coordination with key stakeholders and local leaders.

Leicester Council is committed to undertaking community engagement for taking forward any interventions, into full design and development, that may result from the BSM process.

Intervention Blueprints

Core participants identified the following intervention concepts as a result of the workshop series:

Intervention 1: Health-Service Entry Points for Digital Skills and Support

Overview: Intervention 1 positions health settings as trusted, low-barrier entry points into digital inclusion, using GP surgeries, pharmacies, and public health outreach (e.g. at the Pork Pie Library) to introduce older people to digital tools and support. It combines in-situ engagement (e.g. taster sessions, pop-up support) with clear and standardised referral pathways into the Let's Get Digital programme.

Rather than delivering full training in clinical environments, Intervention 1 focuses on short, practical demonstrations linked to immediate health-related tasks (e.g. booking appointments, ordering prescriptions), alongside signposting into structured LGD courses and community-based support.

Messaging should emphasise convenience, independence, and staying connected while avoiding overly 'educational' framing.

In addition to this, the intervention could also create an iterative engagement mechanism: capturing insights on where older people struggle with digital health services and feeding these into service and programme design at LCC. This responds directly to gaps identified in the mapping around limited understanding of behavioural and psychological barriers.

Potential Delivery Model

- LCC Adult Education and Public Health teams co-design and coordinate delivery, working with local GP practices (e.g. Sturdee Road Health and Wellbeing Centre or Pasley Road Health Centre), pharmacies, and other health-related settings within the neighbourhood. Trained outreach staff or digital champions deliver short taster sessions in waiting areas (with a specific focus on referring participants to LGD programme) and capture insights into barriers, enablers and preferences to feed back to LCC services.

Target Behaviours

- Older people engage with digital taster support in health or outreach settings
- Older people enrol in LGD courses following these sessions
- Older patients use online systems to book GP appointments or order prescriptions
- Health and outreach staff consistently signpost to digital support pathways

Beneficiaries

- Primary: Older people accessing health services
- Secondary: GP practices, pharmacies, LCC Adult Education and Public Health teams as well as wider service design teams

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Older People access GP for appointments and pharmacy online to book prescriptions" (Cluster 6: Health and Wellbeing)
- "LCC Services devise strategy and focus to tackle digital exclusion" (Cluster 1: Strategy and Influencing)
- "Older People acquire digital skills" (Cluster 4: Training and Learning)

Readiness Score

- 2 (Moderate Readiness)

This intervention addresses key motivational and opportunity barriers identified in the mapping by leveraging trusted health touchpoints and linking digital skills to immediately relevant outcomes. It creates visible, low-commitment entry routes, while strengthening pathways into existing provision (LGD).

Importantly, it introduces an iterative engagement mechanism into the system: capturing real-time insight on digital challenges older people face and related psychological barriers can inform more

About the Readiness Score

The readiness score assesses the extent to which the intervention can be implemented:

1. Low readiness - Intervention is in the early stages of design, and requires extensive design, testing, and review. High risk profile.

2. Moderate readiness - intervention is feasible and grounded in existing assets, but requires piloting, scalability testing and refinement.

3. High readiness - ready to be tested with target groups and refined where necessary, near implementation, with low barriers and low risk profile. For implementation

The readiness score is further defined in the methodology section.

targeted service design and communication from the Council. The intervention therefore not only drives uptake of digital skills support but also strengthens the system's ability to learn and adapt.

Key risks include:

- Health settings may not be conducive to engagement (time pressure, health anxiety) and thus require careful design focusing on minimal intrusion and optional interactions. This could be mitigated by running sessions via public health outreach at venues e.g. Pork Pie Library.
- Potential ambiguity around scope (taster sessions versus delivering actual training on site) could dilute effectiveness if not clearly defined.
- Messaging may inadvertently deter engagement if it is perceived as age-targeted.
- Feasibility is unclear due to limited input from local healthcare providers whose buy-in is crucial to this intervention.
- Financial capability barriers as highlighted in the spatial analysis may limit the extent to which skills learned through LGD are reinforced, as individual led practice requires access to a connection and device.

Intervention 2: Intergenerational Digital Skills Exchange Programme

Overview: Intervention 2 establishes a structured, socially embedded digital skills exchange programme, using intergenerational interaction as a way to build confidence, motivation, and sustained engagement. Delivered through Eyres Monsell Club for Young People with the possible assistance of Pork Pie Library, the programme combines informal social activities with reciprocal learning, where older residents receive digital support while contributing their own skills, knowledge, or experience.

Digital learning is positioned as a by-product of social participation rather than a formal objective, addressing barriers identified in the mapping around anxiety, low confidence, and negative perceptions of structured training. The model also responds to preferences which workshop participants noted for informal, drop-in style support and creates a low-pressure environment for early engagement; particularly before digital needs become urgent. Intervention 2 also draws on feedback from workshop participants as to the value of positive incentives for learning participation, driving learning engagement through comfortable engagement and social activities.

The intervention includes a defined pathway into wider support (e.g. LGD courses), alongside tailored, non-stigmatising communications to ensure that the offer feels relevant and inclusive. An initial pilot phase is used to test resonance with both older and younger participants and refine the delivery model.

Potential Delivery Model

- Eyres Monsell Club for Young People leads delivery, possibly together with Pork Pie Library and in partnership with LCC Adult Education, local schools or colleges and relevant community organisations. The facilitation model includes trained volunteers (not exclusively young people but anyone with digital skills and the ability to teach them to older people) to provide digital support, guided by Adult Education guidance where needed. Outreach and promotion for the exchange happen through community networks and avoid age-labelled language, focusing instead on emphasising social, interest-led participation.

Target Behaviours

- Older people attend intergenerational, socially oriented skills exchange sessions
- Participants (young people and other volunteers) provide informal digital support during activities while learning skills from older people

- Older people engage with digital tools in a low-pressure environment
- Older people transition into further support (e.g. LGC courses) where appropriate

Beneficiaries

- Primary: Older people on the Eyres Monsell and Gilmorton Estates who are less likely to engage with formal training
- Secondary: Young people and community volunteers engaged in skills exchange

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "Eyres Monsell Club for Young People organise activities like bowling, bingo and a mental health café" (Cluster 6: Health and Wellbeing)
- "Older People acquire digital skills" (Cluster 4: Training and Learning)

Readiness Score

- 1 (Low Readiness)

Intervention 2 addresses key motivational and capability barriers by embedding digital learning within trusted, social environments, reducing anxiety and reframing engagement as enjoyable and reciprocal; specifically creating an accessible entry point for those disengaged from formal provision. Additionally, it may help decrease loneliness and isolation among older people and younger people alike.

By linking into existing community assets and providing clear onward pathways into LGD, it strengthens system connectivity and complements structured training offers. The pilot approach also enables testing of critical assumptions, such as the effectiveness of intergenerational delivery and participant preferences while generating insight into how different cohorts engage with informal support models.

Key risks include:

- Uncertainty around engagement from younger people and broader community volunteers may affect delivery / scale
- Intergenerational support may not suit all older participants; some may prefer peer-based support
- Risk that the setting or branding (young people versus old people) alienates those who feel like they do not belong or identify as either of those groups, meaning outreach and promotion have to be carefully designed
- Quality and consistency of digital support may vary without appropriate guidance or training for volunteers
- Limited evidence at this stage on local cultural fit and resonance; hence, pilot testing is required to validate assumptions on its effectiveness

Intervention 3: Digital Inclusion Coordination and Referral System

Overview: Intervention 3 strengthens coordination across organisations by establishing clear, consistent, and resident-centred referral pathways into digital skills support, particularly the LGD programme. It focuses on improving how frontline staff across LCC, VCSE organisations, and community partners signpost older people to appropriate support, thus directly addressing the fragmentation identified in the mapping.

The approach combines system-level alignment (clarifying roles and pathways) with resident-centred design (ensuring language and communication resonate with older residents in particular). It introduces

ongoing testing and refinement of referral routes (e.g. through methods such as 'mystery shopping' and resident feedback) to ensure pathways function effectively in practice.

Importantly, the intervention is scoped specifically around digital skills support pathways (rather than all digital services), making it more targeted and deliverable. It also establishes a continuous learning loop, where insights from referrals and resident experiences inform both service improvement and strategic planning.

Potential Delivery Model

- LCC Digital Inclusion leads coordinate delivery (possibly together with Adult Education), working with Public Health, VCSE organisations and relevant community partners to co-design a simple, standardised referral framework for digital skills support; with LGD as the core offer. Periodic testing of pathways is undertaken by frontline staff and dedicated resident groups.

Target Behaviours

- Frontline staff consistently refer older people to appropriate digital skills support (e.g. LGD)
- Older people follow referral pathways and access relevant support
- Relevant system Actors regularly review and refine referral processes based on testing and feedback

Beneficiaries

- Primary: Older people seeking digital skills support
- Secondary: Public sector and VCSE organisations delivering or signposting to digital inclusion services

Addressed Leverage Points

Leverage points and associated clusters for this intervention are:

- "LCC Services devise strategy and focus to tackle digital exclusion" (Cluster 1: Strategy and Influencing)
- "LCC / VCSEs / Others lack of knowledge / confusion about which organisations provide which digital services (leading to wrong referrals or a lack of referrals)" (Cluster 1: Strategy and Influencing, Cluster 2: Accessing Services, Cluster 3: Community Support)
- "Older People struggle to access essential services" (Cluster 2: Accessing Services)

Readiness Score

- 3 (High Readiness)

Intervention 3 addresses key opportunity barriers by simplifying and standardising access pathways into digital skills support, reducing the risk of misdirection or disengagement. It also responds to motivational barriers by ensuring communications are clear, relevant, and non-stigmatising for older residents.

It strengthens coordination across Actors, underpins the effectiveness of other interventions (e.g. health-based entry points), and creates a scalable model for continuous improvement. Over time, it also provides a practical evidence base and case study for applying BSM in service design.

Key risks include:

- Unclear ownership and leadership across council teams (e.g. Adult Education versus Digital Inclusion) may limit coordination
- Existing fragmentation between organisations may make alignment and adoption of standardised pathways challenging

- Maintaining up-to-date information across multiple partners requires ongoing resources and oversight
- Effectiveness depends on consistent use by frontline staff
- Resident testing adds value but requires time and coordination to implement effectively

Reflections

Benefits - and learning

Participants in the BSM workshops reflected the following benefits from the trial:

- BSM participants reported enjoyment of this method, especially the in-person formats, and that it reflected some familiar and positive approaches that they'd used in the past. BSM brought a research-focused methodology, which differed to the current day-to-day activities of the team. This also provided an opportunity to connect and reflect together.

- The BSM workshops felt well-paced, structured, and focused, and this helped introduce a different type of approach, offering space for a useful academic and reflective exercise. However, some participants also noted that having countdowns on workshop activities could add excessive pressure to review and provide thoughts quickly.

- The method worked well to ensure different participants' insights and understanding of digital inclusion and neighbourhood fed in throughout the process and into the mapping. It also helped to demonstrate and reinforce the complexity and multi-dimensional nature of digital inclusion.

- The BSM enabled a neighbourhood case study to be developed for understanding digital inclusion. Some participants noted that new learning was enabled for the selected neighbourhood, though others also reported some confirmation of existing assumptions and less new learning, which they considered a risk of the approach. Hosting the in-person sessions in the neighbourhood was also positive to help maintain a place-based focus.

- The systems element of the approach helped participants to shift their thinking about digital inclusion from being a standalone problem to understanding themselves as part of the system and how different Actors can shape and influence Behaviours and outcomes, beyond their direct delivery activities. The BSM approach also enabled 'pinch points' to be identified, and to regularly consider the who, what and why. This added complexity to current understanding, which may have required some participants to buy-in to this - to trust the value of demonstrating and recognising the complexity.

- The methodical process of the BSM brought a well thought-through rationale and a potentially more robust plan for prioritization than often happens. This also successfully enabled a set of intervention outlines to be developed. The intervention and prioritisation robustness will be tested through what happens next.

In terms of other learning through the trial, there was interest to have known more about the progress and experience of the other trials, with a desire for continued learning and sharing with other areas.

The independent facilitator role was recognised as being critical to effectively guide the BSM activity and to objectively capture and feedback the discussion points. If the methodology were to be rolled out it would

need effective facilitation skills, ideally by someone outside of the immediate area and team, to maintain neutrality.

There was interest expressed in understanding the behaviour change theory and terminology, such as the behaviour change wheel and the APEASE framework, in more detail to aid its use in later BSM stages and beyond the trial.

A key learning point was the value in setting expectations more clearly upfront on the role and input, potentially at different levels of participation, to help plan and set commitment to the tasks between the workshops. This can help secure earlier buy-in and commitment for more consistent and active participation.

BSM was seen to be an effective tool at the start of a new programme or project, to ensure a systematic approach and to build understanding and connections across a team and wider stakeholders. It will then work well at evaluation points to be revisited and reviewed. This step would also benefit from a how-to guide.

Overall, there is a recognition that assessing the BSM approach will require time to understand how well the map reflects on-the-ground experiences; if interventions are feasible; and how effective they are when delivered.

Limitations - and recommended improvements

Leicester participants reflected that there are several limitations to be mitigated for future BSM projects:

- The main challenge of the trial was the limited timescale, meaning the project felt rushed. Whilst time constraints can drive momentum and efficiency, it would have been more valuable for additional time to prepare for the sessions, ensure key participants were brought into the trial, and to review activities between workshops.

- Representation levels limited data richness: There was some limited representation in the workshops, with less diverse voices and topics represented or not consistently so. This was partly due to logistical challenges with the project's constrained timescale limiting upfront planning. Gaps in representation impact and bias the development of the map, where the presence of other important Actors may have brought other insights into the BSM development. E.g. a missing Actor was the Eyres Monsell Young People's Club (which provides activities for older people) and it could have been a good opportunity to include older resident representatives 'in the room'. Though this is noted to have required time and careful design, so was potentially beyond the scope of this trial.

- More time would have been particularly useful for ensuring residents were involved. More on-the-ground research and consultation could have occurred before the first workshop, to gather resident insights and to engage more partners from the beginning. It was recognised that the participants were inevitably making assumptions about the area. However, the project did encourage broader reflection on how well the neighbourhood is known and what needs to be undertaken to understand it better. It was also raised that this desire to understand what local people thought was expressed at the project inception, so it was a gap not to have understood this through the project.
- However, the time intensive nature of BSM might be a drawback for future applications, as significant time and resources are needed for full engagement across different stages.

- The online and tool-based delivery of workshops 1 and 4 was challenging for some and getting used to the tools was somewhat distracting. Generously, one participant saw an unintended benefit in that they understood what it was to be 'digitally excluded'. Others reported the hybrid mix to be

about right and effective. To improve this: these differences refer to a broader finding that preferences for participation, and steps to make it effective, will vary by individuals, groups, place, time, and context. Inclusive design and suitable adaptation options are important to support effective roll-out for varied future applications.

- Participants differed in how valuable and easy-to-use they found the BSM map. Some found it overly complicated and were not sure how they would now use it with stakeholders who did not participate. One participant described it as a 'process documentation tool', which is too complex to share readily as a standalone product. There was a need for a clear purpose of where and how the map would be shared with stakeholders. For some, it would likely be a useful starting point for discussion and for some conversations it may be too overwhelming.

  In terms of using the map during the project, some participants found it to be difficult, especially on a small screen, and that it was difficult to retain information about the full picture of a connected system alongside the details all at once. A challenge remained for how best to present the map so people can look at segments at a time, to prevent it from becoming too large to process. To improve this:
  - One suggestion was that it needs to be printed in large format and put on a wall.
  - Another suggestion was made to use an alternative platform where the map can be layered so that different elements can be switched on/ off. This would make the map more manageable and useful as a visual tool.

  A risk was also raised of 'continuously mapping' as more components can often be added. Being strict on the boundaries and scope early on - and sticking to it - matters.

- It was felt that interesting interventions emerged from the process, which did reflect the workshops and participants' inputs. However, there was a need for more clarity and commitment to the 'what next' as some participants did not know how the interventions would now be taken forward.
  This provides a risk that interventions may stall without going beyond ideation. A next step, using the trial's momentum, could bring relevant partners to assess and review interventions, bringing in more detail about deliverability, and accountability.

- Direct insights from residents will now need to be brought in to further develop understanding of digital inclusion in the neighbourhood, and to test and refine interventions. This was seen as the second critical point for resident input, whilst accompanying engagement and/ or direct participation would be a positive feature across the project stages. Participants noted that they would welcome guidance to support the integration of Community Engagement data.

Participants noted that there may be moments where critical thinking and more 'intra group' challenge. There is a need to balance the openness to and valuation of all contributions against the examination of contributions and suggestions at suitable points. Without this, there is a risk that louder voices or current agendas shape the BSM outcomes. The trial's application of BSM here left more of the critical thinking towards the intervention stage, including with APEASE, where the facilitation was generally based on being open to all contributions. This makes this intervention assessment stage even more important to check how workable the interventions are and to validate the connections (e.g. underlying Behaviours and leverage points) that drove them.

While some participants felt they could use the methodology again, independently or as the lead, they would need to apply it 'relatively soon before the steps are forgotten'. Other participants were more

confident in taking on a successful participation role again. Though there may not be an imminent opportunity to use the method again in its 'pure' form, the adult skills team reported an intention to bring in the learning from the process into the strategic thinking for future projects.

Next steps

The BSM trial supported LCC to undertake important reflection and design work, in time to consider how best to utilise new funding. This includes the 'Let's Get Digital' programme, which includes a further three years of delivery. There is therefore an excellent opportunity to utilise outcomes of the BSM to inform and shape near-term and future delivery.

A key outcome for the Leicester adult skills team is to move towards a focused strategy of developing area-specific interventions. The team aims to use the intervention blueprints as a framework to help allocate funding and resources, including the presentation of the research and interventions to a neighbourhood committee. The team also intends to turn the BSM and its key insights into a more digestible information pack for stakeholders.

It was recognised that interventions that involve working with communities take time to then be designed and deployed. A key next step for the intervention blueprints that emerged from BSM is to carefully consider, using the APEASE criteria, their ownership, required collaboration, and what will make them practical and effective.

It is critical that older residents are brought into this process to test their interest and needs, shaping interventions so that they work best for different target cohorts. The BSM outputs provide a good starting point, in setting out likely Drivers, whilst gathering insights and testing with residents will sharpen this understanding and address hidden assumptions.

In the longer-term, it was suggested that the methodology would be valuable to repeat at the end of any implementation periods to re-evaluate the BSM and see where progress has been made.

Table 9: Waltham Summary Table

System Objective	Behaviours	Drivers	Leverage points	Interventions
"Our goal is to enable older residents in Waltham to build digital skills and confidence at their own pace by ensuring digital learning and connection opportunities exist alongside non-digital ones and providing the means and skills to use digital tools safely and in ways that genuinely enhance their daily lives; e.g. by decreasing social isolation of single households. This requires: • Challenging the assumption that this community does not require support • Understanding the current state of digital accessibility and activity (who is or is not digitally active & why) • Bringing relevant, local organisations together to understand the needs and barriers of this cohort • Providing targeted and trusted support that enables and encourages individual choice"	Current behaviours are characterised by avoidance, reliance on others, and preferences for in-person services. Support systems tend to reinforce short-term task completion rather than long-term skills development; and there is a lack of coordination and feedback between public and third sector organisations.	The system is heavily shaped by opportunity constraints, particularly fragmented service coordination, limited access points, and insufficient capacity within support infrastructure. Capability barriers (especially low confidence and limited digital literacy) interact with motivational barriers such as fear, distrust, and perceived lack of relevance. Critically, these drivers reinforce each other, creating a self-sustaining cycle of disengagement that is difficult to disrupt without systemic coordination.	Leverage points exist across both operational and structural levels, with immediate gains possible through service accessibility improvements (e.g. a dedicated digital hub) and clearer support pathways and communication thereof (e.g. via newsletters). However, the most impactful leverage lies deeper in the system: organisational ownership of digital inclusion and behavioural norms around trust and service use; both a shift in institutional practices and service user mindsets are required for sustained behaviour change.	The intervention blueprints reflect a deliberately multi-layered strategy targeting opportunity via access, capability, and motivation simultaneously. There is a clear emphasis on strengthening and connecting existing trusted community assets rather than building new structures, which improves feasibility and legitimacy. Importantly, the combination of hub-based, home-based, and peer-led approaches demonstrates recognition that behaviour change requires multiple system touchpoints rather than isolated solutions.

Table 10: Horn Park Summary Table

System Objective	Behaviours	Drivers	Leverage points	Interventions
"Our goal is to reactivate connections and rebuild trust of older residents in Horn Park towards the Council and between one another by co-creating long-term, needs-led digital inclusion solutions that reduce isolation and foster a sense of belonging in a neighbourhood with limited community spaces and historical barriers to engagement. This involves: • Recognising the legacy of isolation and low community activation in this neighbourhood; • Helping residents feel listened to and creating a voice for them in local decision-making; • Enabling them to fully participate in both digital and non-digital community life; and, • Harnessing emerging changes and solutions in the Digital Inclusion and community engagement space."	Current behaviours are characterised by disengagement from digital services, reliance on informal support networks, and limited participation in community activities. Older residents often avoid digital systems due to cumulative administrative burden and negative past experiences. At the same time, there is emerging potential for peer-based support and re-engagement through shared experiences and community-led initiatives.	The system is primarily shaped by structural opportunity constraints and trust-related motivational barriers rather than capability alone. Limited physical infrastructure, fragmented communication channels, and lack of clear engagement pathways restrict participation, while distrust, fear, and apathy further suppress demand. These factors interact to create a system where even well-intentioned support cannot gain traction without first addressing foundational conditions for engagement.	Leverage points span immediate access improvements and deeper system transformation, with practical opportunities in activating existing assets like St Mildred's Church and strengthening local signposting. However, the most significant leverage lies in improving system insight and rebuilding trust through relational actors such as Community Engagers. This indicates that effective change depends on combining tangible access interventions with deeper shifts in understanding, coordination, and resident–institution relationships.	The intervention approach is structured as a coordinated system combining physical hubs, outreach support, and service-specific entry points rather than isolated initiatives. There is a strong emphasis on embedding digital inclusion within trusted relationships and everyday contexts, particularly through healthcare and community activities. Collectively, the interventions reflect a sequencing logic: establishing trusted spaces and relationships first, then layering capability-building and service engagement, contingent on sustained coordination and system capacity.

Table 11: Havelock Estate Summary Table

System Objective	Behaviours	Drivers	Leverage points	Interventions
"Our goal is to improve digital inclusion of older people on the Havelock Estate to support income maximisation. This will: • Improve financial stability of older individuals • Improve access to and benefit of using key digital tools (e.g. NHS App) • Amplify voices and improve social and democratic participation • Reduce the risk of fraud and scams, and Behaviours that may increase isolation"	Key behaviours include seeking support, engaging with digital services for everyday and financial tasks, attending skills support, and in some cases sharing knowledge with peers. At present, these behaviours are often disrupted by avoidance, reliance on others, and inconsistent follow-through after initial support. Informal social diffusion is especially important, with residents' decisions strongly shaped by what they hear from trusted local networks.	The system is driven by a reinforcing mix of opportunity, capability, and motivational barriers, with structural constraints playing a major role in shaping individual behaviour. Limited service capacity, fragmented support, and physically or socially inaccessible provision reduce opportunities to engage, while language barriers, disabilities, and low skill transfer affect capability. These interact with fear, mistrust, and negative social narratives to produce cycles where failed digital encounters increase anxiety and further reduce future engagement.	Leverage points range from practical improvements in access to deeper changes in coordination, trust, and social learning. While face-to-face provision and clearer support routes matter, the analysis suggests that the strongest leverage lies in improving coordination across organisations and using trusted community relationships to influence awareness and motivation. Word-of-mouth is especially significant because it shapes both what residents know and how safe or worthwhile digital engagement feels, making it a deep system lever.	The intervention set is designed to respond to different but connected system failures: fragmented navigation, inconsistent progression from initial support to sustained use, and language-related exclusion. Together, they shift the emphasis away from one-off training and toward community-based repeated engagement embedded in real-life tasks and local relationships. This creates a more systemic model of intervention, where navigation, practice, and culturally responsive support reinforce one another rather than operating as separate offers.

Table 12: Noel Park and West Green Summary Table

System Objective	Behaviours	Drivers	Leverage points	Interventions
Our goal is to deepen our understanding of why older residents in Noel Park & West Green strongly prefer face-to-face interactions, and to use this insight to design support that both honours these preferences and helps residents participate comfortably and confidently in essential online services and local decision-making. This involves: • Building confidence and skills to use digital tools safely in an era of AI and misinformation; • Identifying and removing barriers to accessing and navigating digital applications and processes; • Accommodating diverse learning styles to ensure support is genuinely accessible to all; and, • Strengthening collaborations to coordinate support and amplify older residents' voices.	Key behaviours include continued reliance on face-to-face services, delayed engagement with digital tasks, and use of support that often resolves immediate problems without building long-term capability. Older residents may access help through libraries, VCSEs, and personal networks, but engagement is often reactive and shaped by urgency rather than ongoing skill development. At the same time, in-person settings appear to play an important positive role in trust-building, social connection, and motivation.	The system is shaped by a combination of opportunity, capability, and motivational barriers, but the analysis suggests fragmentation and trust-related factors are especially important. Older residents are navigating a crowded but not always aligned support landscape, where inconsistent services, limited insight-sharing, and 'do it for them' models reduce the chances of sustained capability-building. Motivation-related barriers such as fear, low confidence, stress, and the social value of in-person contact seem especially significant, but the persistence of these preferences remains an evidence gap rather than a fully explained finding.	Leverage points appear to lie less in expanding provision and more in improving alignment, communication, and learning across the system. Practical changes such as better signposting, less jargon, and easier access to community-based support can help, but they are unlikely to be sufficient on their own. The more powerful leverage points are around insight-sharing, coordination, and understanding residents' in-person preferences well enough to redesign support in ways that feel credible and accessible to them.	The intervention set is focused less on direct resident training and more on strengthening the system around residents: improving shared infrastructure, formalising insight flows, and generating deeper behavioural evidence. This is analytically significant because it reflects the conclusion that the main barriers are not simply individual skill deficits, but coordination failures and an incomplete understanding of behaviour. Taken together, the interventions form a sequenced approach in which better information, stronger coordination, and targeted research create the conditions for more effective future support.

Table 13: Eyres Monsell and Gilmorton Estates Summary Table

System Objective	Behaviours	Drivers	Leverage points	Interventions
Our goal is to improve digital inclusion of older people on the Eyres Monsell & Gilmorton Estates in a way that addresses wider issues of isolation, while also recognising gaps in our understanding of how older residents currently use technology, their reliance on family and friends for online tasks, and the impact of lower educational attainment in the area. This involves: • Enabling older people to access essential online services independently and confidently; • Building social connection and reducing loneliness via digital inclusion as a way to bring people together; • Understanding real patterns of technology use and avoiding assumptions; • Developing continuous and sustainable solutions that deliver lasting change.	Key behaviours include delaying or avoiding digital tasks, relying on family and friends, and engaging inconsistently with formal support such as training courses. Older residents may attempt digital access once, but negative or unclear experiences often lead to disengagement rather than persistence. At the same time, there is evidence of latent willingness to learn when support is delivered in trusted, socially meaningful contexts.	The system is driven by a dense interaction of capability, motivation, and opportunity barriers, with educational and psychological factors especially prominent. Low skills, literacy barriers, changing technologies, memory and mobility issues, and fragmented referral routes all make engagement harder, while anxiety, shame, fear of scams, and low trust reduce the likelihood of help-seeking. These drivers do not operate independently: together they produce reinforcing cycles of avoidance and dependency that weaken both confidence and uptake of existing support.	Although the mapped leverage points are relatively few, they are analytically important because they connect immediate service interactions to broader system change. Practical entry points such as GP access, community activities, and library-based support can trigger engagement, but the deeper leverage lies in referral clarity, trusted pathways, and sustained skills acquisition. This suggests the system can be shifted most effectively not by adding more isolated provision, but by improving how trusted touchpoints connect residents into coherent support journeys.	The intervention set combines trusted entry points, informal learning environments, and coordination mechanisms, reflecting an understanding that no single delivery mode will shift behaviour on its own. Health-based outreach links digital inclusion to immediate relevance, intergenerational activity reframes learning as social and low-pressure, and referral reform tackles system fragmentation upstream. The interventions operate together rather than as separate projects, with their main strength lying in how they reinforce one another across motivation, access, and system alignment.

Cross-neighbourhood findings

In this section we explore findings that emerge as a result of BSM across the five trial neighbourhoods. Data from the additional analysis of spatial data and community engagement is incorporated to provide further context and to explore the potential benefits and limitations of BSM in the context of neighbourhood-level digital inclusion strategy development and intervention design.[36]

The below findings are explored thematically:

- Understanding neighbourhood-level digital inclusion
- Digital inclusion Behaviours and Behaviour clusters
- Drivers of digital inclusion Behaviours
- Barriers and enablers to digital inclusion
- Important interactions

Understanding neighbourhood-level digital inclusion

Each neighbourhood differs in its nature of digital inclusion, whilst there are some experiences and findings that may be common and more likely.

Across neighbourhoods, BSM showed that digital inclusion for older residents is not only due to a lack of digital skills. Instead, Behaviours were often shaped by different combinations of trust, confidence, service design, local support and communication infrastructure, as well as social connection.

However, the balance of these issues differed significantly between neighbourhoods. In Horn Park disengagement was rooted in the absence of accessible community spaces, limited trust in local institutions and limited pathways for engagement. Conversely, in other neighbourhoods (e.g. Eyres Monsell and Gilmorton), digital skills and confidence featured more explicitly within the mapped system. Geospatial analysis further confirmed the prevalence of access barriers: in Horn Park, the lack of community spaces was clearly evident, and on the Havelock Estate, key community assets like Ealing Central Library and Greenford Community Centre require bus travel.

In some neighbourhoods, BSM revealed that a main challenge was the absence of a functioning support infrastructure for older residents. This was most apparent in Horn Park, where workshop participants could not readily identify where or how skills support could realistically be delivered in the short-term given the lack of community infrastructure. Other neighbourhoods differed: in Noel Park and West Green and on the Eyres Monsell and Gilmorton Estates, provision was available but fragmented and not always in line with the needs of older residents. Geospatial analysis also highlighted the skills support barrier, and that for some estates low levels of education and training and lower English language proficiency are also likely to be main drivers of digital exclusion.

BSM therefore added value by showing that superficially similar digital inclusion challenges across neighbourhoods were behaviourally different. It helped distinguish between places in which the priority is building foundational conditions for engagement and those where trusted support needs scaling and existing offers need redesign or better coordination.

[36] Note: Findings reflect the five trial areas, which were not representative of the UK, and therefore these findings are not generalisable. However, these insights from the five neighbourhoods may help inform and build understanding of digital inclusion at the neighbourhood-level and the application of BSM elsewhere.

Geospatial analysis also highlighted social connection challenges as main barriers for the target cohort (e.g. Waltham). In the BSM the role of key local actors (e.g. Friendship@Home) as a route to tackle this comes through. An additional recurring infrastructure gap identified by geospatial analysis across all neighbourhoods was the prevalence of at least one OA with residential broadband speeds below 10mbit/s. The limitations presented by poor internet connection were rarely referenced in either the BSM or community engagement activity.

Digital inclusion Behaviours and Behaviour clusters

A common behavioural pattern emerging through BSM across the five neighbourhoods was that older residents often delayed, avoided, or disengaged from digital tasks and services as the result of encountering friction, uncertainty, or unsatisfactory experiences: for example, in Horn Park, this manifested through disengagement with council services as a result of historic tension; on the Havelock Estate, through avoidance of digital everyday and financial tasks; in Noel Park and West Green through delayed engagement until issues become urgent; and on the Eyres Monsell and Gilmorton Estates through making one attempt and then disengaging.

Another recurring Behaviour was the reliance on informal support from family, friends, neighbours and peers. This Behaviour appeared across all neighbourhoods, with individual nuances: in Waltham and on the Havelock Estate, family and friends were noted as important support channels with uneven access; in Noel Park and West Green, participants specifically highlighted the risk of overreliance on a spouse for digital tasks; and in Horn Park, the BSM workshops identified shared digital exclusion itself as a possible basis for peer support and connection. Community engagement further confirmed these behaviours: those engaged noted their reliance on family members to keep up to date with technology and services, and cited family and friends as those they would go to first for informal support. Local support and trusted community members were also cited (e.g. accessing support via Waltham Library). Community engagement also highlighted examples of reliance on formal support (e.g. through mobile phone providers in Horn Park) for device or service issues. Interestingly, there were no references to this form of support in BSM maps.

A related further commonality was that institutional support Behaviours were often reactive and task-based rather than designed to build capability. This came through clearly in Waltham, where support was often described as delivering immediate problem-solving rather than long-term skills development. Similarly, participants in the Noel Park and West Green workshops highlighted how 'do it for them' support can reinforce dependency, while on the Eyres Monsell and Gilmorton Estates an explicit preference among older people for informal, drop-in problem solving (over structured digital skills courses) was discussed.

Community engagement appeared to provide richer information on the preferences of older people for training and support, e.g. digital support that is without judgement, not patronising and to be delivered in a friendly and informal manner to address problems. BSM provided good detail on the types of skills support available, but ideas on how it could be better tailored to meet the needs of older people was largely speculative rather than based on validated resident data. Both BSM and Community Engagement highlighted a clear tension between the desire of older people to gain immediate support and resolution for issues, whilst BSM illustrated the desire of system Actors to move older people towards training to build skills to overcome issues on their own.

BSM maps highlighted that institutional Actors often do not operate as a coordinated system, leading to fragmented delivery and duplication. Across the Havelock Estate, Waltham, Noel Park and West Green as well as the Eyres Monsell and Gilmorton Estates, mapping revealed Behaviours such as inconsistent

signposting, unclear referral pathways, and limited visibility and knowledge of 'who does what'. In Noel Park and West Green, the workshop specifically highlighted the risk of overlapping VCSE provision and competition for service users and funding.

Another commonality across neighbourhoods was the lack of iterative engagement mechanisms feeding into strategy design and service adaptations. Whilst BSM participants referenced the need to move towards processes that evaluate and review (e.g. Eyres Monsell and Gilmorton Estates' plan to review NHS App usage or Horn Park's plan for the DI Team to build on insights gathered through Citizens UK) few maps showed current service improvement or strategy level actions. As a result, several interventions incorporate iterative engagement mechanisms (e.g. the 'Health-Service Entry Points' intervention on the Eyres Monsell and Gilmorton Estates or the 'Insights and Coordination Network' intervention in Noel Park and West Green).

Across all neighbourhoods, there was a dependence on highly relational, place-based Actors (e.g. Community Engagers in Horn Park, The HAV on the Havelock Estate, and Friendship@Home in Waltham) to bridge trust and access gaps. However, this reliance was often informal and not systematically supported or scaled.

Crucially, the behavioural emphasis varied by neighbourhood. In Horn Park, Behaviours around community participation and trust-building were more central than those around skill development or device access, whereas on the Eyres Monsell and Gilmorton Estates, acquiring and retaining digital skills was a central theme. On the Havelock Estate, a critical focus of the map were informal communication channels and peer support. The spatial analysis had little exposure to individual or institutional behaviours and was thus unable to validate the BSM findings on older people's digital inclusion behaviours.

Drivers of digital inclusion Behaviours

Across the five BSM maps, a common set of primarily motivational Drivers repeatedly shaped Behaviours: low confidence, fear of scams or making mistakes, confusion caused by multiple systems or changing interfaces, and limited trust in services or support pathways. These Drivers were nuanced but present in all neighbourhoods, and were often mapped as reinforcing one another.

On the Havelock Estate, fear and cross-platform confusion were highlighted as factors that drive avoidance. In Waltham and on the Eyres Monsell and Gilmorton Estates, fear of scams and uncertainty about which tools or apps were safe to use were key psychological barriers, further reinforced by stories from peers or the media; on the Eyres Monsell and Gilmorton Estates, this was further compounded by shame and a desire to appear capable. In Noel Park and West Green, fear of scams and unsafe online environments were linked to the reinforcement of in-person preferences.

Language and communication barriers limit access to digital services, particularly in diverse neighbourhoods. BSM showed that on the Havelock Estate, language barriers were identified as shaping both access to and effectiveness of support across the system; in Noel Park and West Green, inconsistent use of jargon-free communication and uneven translation provision reduced accessibility, especially for non-English-speakers. Geospatial analysis further confirmed the presence of these barriers for some estates: both Havelock Estate and Noel Park and West Green included high proportions of residents with English as their second language, which may exacerbate the risk of digital exclusion.

However, alongside these commonalities, the BSM maps also showed important variation: in Horn Park, distrust was linked less to online risk but more to the neighbourhood's historical experience of low community activation and perceptions of limited action from the Council. On the Eyres Monsell and Gilmorton Estates, identity-based Drivers were very prominent: e.g. beliefs among older people that

technology was 'not for them', resistance to age-labelled provision, and negative perceptions of formal learning environments. In Noel Park and West Green, one of the most important findings was that several plausible drivers of in-person services had been identified by workshop participants but remained unvalidated by residents.

At the institutional level capacity, funding constraints and short-term planning surfaced as critical factors shaping what types of support are delivered and how. Across all neighbourhoods, Actors were frequently described as operating under staff and budget constraints, which limited the scale, consistency, and reach of support provision. In Horn Park, for example, system momentum itself was noted as fragile due to reliance on short-term funding (e.g. for the Citizens UK deep listening project).

Another set of persistent system-level Drivers were lack of coordination, shared ownership and role clarity among the network of local Actors. For example, in Waltham, participants noted the absence of clear responsibility for Digital Inclusion across Council teams and partners; in Noel Park and West Green, it was highlighted that all Council services should carry the responsibility of designing accessible websites.

Overall, policy and cost-related Drivers behind digital-by-default services were thought to be increasing pressure on service providers and users alike, without equivalent investment in inclusion support. This results in a structural imbalance: more residents require support, but the systems are not yet configured to provide it in a consistent and accessible manner.

Mapping also showed that affordability and financial challenges matter. The financial cost of being digitally included was a recurring discussion by BSM stakeholders, who referenced the limitations that low affordability put on older people, particularly during the cost-of-living crisis. This was particularly true for the Havelock Estate, where income maximisation was core to the system objective. However, compared to other barriers, financial issues generally were less prevalent in the system maps. Community engagement further highlighted resident concerns regarding the cost of devices, which act as a compounding barrier to digital access and engagement. This means the ease and availability of device loaning may be an important intervention element. Financial concerns also relate to how to safely use devices and online services: e.g. residents on the Havelock Estate highlighted financial anxiety over money management online, and the impact of scams - potentially limiting utilisation of digital services. The spatial analysis also assessed affordability for those aged 65+ through Income Deprivation Affecting Older People (IDAOPI). The findings suggest that residents in all five neighbourhoods face financial barriers but at varying strengths. For example, those living in the north of Horn Park and in Noel Park and West Green face significant financial challenges. In Havelock Estate, household deprivation at 1-3 dimensions was at high levels, but IDAOPI, while present, was less significant as a barrier.

BSM added value by showing that common headline barriers such as 'fear' or 'low confidence' are nuanced; they emerge from different local systems and interact with different conditions, highlighting the need for interventions to respond to the specific behavioural pathways and context of each neighbourhood.

BSM is valuable for surfacing assumptions about older residents, but it cannot replace direct resident research; rather, it highlights where engagement is needed to validate or challenge those assumptions and better inform intervention design.

BSM helped local stakeholders catalogue barriers and distinguish between what they knew, what they were inferring, and where intervention design risked being based on untested assumptions: in Horn Park, the mapping process challenged the assumption that digital inclusion should begin with skills provision, highlighting instead that foundational conditions for engagement may need to come first; in Noel Park and West Green, BSM surfaced multiple plausible explanations for in-person preferences, but also clearly indicated that these assumptions needed validation with residents; on the Eyres Monsell and Gilmorton

Estates, workshop participants explicitly questioned assumptions about older residents' availability, learning preferences and self-identification with age-labelled support. In Waltham, the system objective itself included challenging the assumption that the community did not require support.

Community engagement surfaced important information that helped stakeholders to challenge assumptions made by workshop participants and refine the maps accordingly. For example, on the Havelock Estate assumptions regarding low smart phone proficiency were removed through engagement with older people who regularly used these devices. Horn Park community engagement also tested assumptions around the extent to which residents would travel to seek advice from technology providers when issues arose. Both are useful examples of how direct resident engagement can help BSM participants build greater understanding of real resident Behaviours, and refine maps and interventions accordingly.

In addition to this, BSM led several partners to consider resident engagement as a follow-up method to fill knowledge gaps revealed through the mapping process, and helped tailor the direction of these endeavours. The spatial analysis only covered resident preferences for using digital services lightly through using the Digital Propensity Index (DPI) in the standard index. The DPI measures the likelihood of someone choosing to do the UK Census online, which can be a proxy for personal preference. This was found to be true for the Eyres Monsell and Gilmorton Estates and Waltham.

Barriers and enablers to digital inclusion

The design of digital and non-digital services was a recurring Driver of Behaviour, highlighting the potential significant role that service design practitioners can play as part of systemic and local interventions.

The influence of poorly designed services for the target cohort was a recurring theme in trial neighbourhoods. Several maps included Behaviour nodes located in clusters including behaviours that limited access or utilisation of key digital services e.g. for the Havelock Estate, this included paying Council bills online; or paying for parking online; and for Waltham, the drive towards the NHS App for accessing digital healthcare including prescriptions, and keeping up to date with changes to the service (e.g. NHS App updates and changes). Service design then further emerged as leverage points around which some intervention blueprints were designed.

Older residents were often encountering digital requirements through multiple service touchpoints, and the cumulative burden of these interactions often contributed to avoidance or withdrawal. Maps also generated reinforcing cycles of behaviour where repeated negative experiences (failed attempts, unclear follow-up, or system complexity) led to residents disengaging and missing the opportunity to build familiarity, which then made them even more likely to avoid future digital tasks.

Service design also surfaced as part of geospatial analysis. Analysis revealed important information about the nature of local physical assets, in some cases highlighting the physical accessibility of community centres and the quality of transport services. Less apparent in geospatial analysis were specific limitations or barriers of Council digital services - which were more apparent as a result of the BSM method.

Supporting and expanding on BSM findings, community engagement brought to light examples where specific formats or online services had multiple steps that resulted in frustration, confusion, and / or distrust. Interestingly, residents raised examples where one service was used well and was experienced to be much easier than a similar use area through another platform or process, for example with the use of online prescriptions vs online GP appointments. The experience of emails and online contact forms in not providing clear follow-ups on receipt was also raised as being a design element that reduces trust and

confidence, which matched assumptions surfaced during the BSM process in several neighbourhoods (particularly on the Eyres Monsell and Gilmorton Estates map). Community engagement also surfaced direct examples where the design of devices can inhibit their use, such as small displays and having keys in close proximity.

Communication and information flows were a recurring driver of digital access, but uptake depends on not only the channel type but coordination and clarity.

Utilising paper-based or word-of-mouth channels emerged as useful channels in several trial neighbourhoods where assets were present, but uptake of support was limited: Communication channels and content were regularly cited across trial sites, with barriers including: (1) lack of coordination of channels that targeted the cohort of interest; (2) unclear messaging; and, (3) lack of clarity of local neighbourhood resources available to people aged over 60 (among older people themselves and public and third sector organisations). The maps that were generated point to the need for local resources and knowledge, more timely and relevant information, and insights as to the most effective channels to reach different demographics within the wider cohort - for example those aged 80+. Communication channels actively shape motivation and expectations, thereby influencing whether older residents seek support in the first place or end up disengaging.

Geospatial analysis provided limited information on communication channels and content or the efficacy of current approaches. Spatial data instead provided important context as to the potential recipients or channels through which messaging could be maximised - and their proximity and public transport accessibility to the target neighbourhood and audience. This is a useful compliment to the insight that was provided through BSM. Community engagement provided insights as to the impact and reach of current communication flows, e.g. Waltham community engagement highlighted a lack of knowledge of a new local digital support offer and raised suggestions for how this would be best communicated. Suggestions included the use of the local newsletter, noticeboards around the village, including outside the pharmacy, and the use of older residents' own examples and testimonies to the value of the support and the environment in which it is provided.

Trusted, place-based actors and spaces are central to digital inclusion, but BSM shows that their effectiveness depends on capacity, coordination, and how well support reflects different needs and preferences.

A strong commonality across neighbourhoods was the central role of trusted, place-based Actors in shaping whether older residents sought help, shared about their needs, or acted in information. BSM consistently showed that support was more likely to be used when delivered through familiar local Actors, in trusted spaces, and in relational ways E.g. in Horn Park, Community Engagers were identified as influential because they were familiar faces who could generate rich, trust-based insights (with St Mildred's Church and The Source as important leverage points); on the Havelock Estate, The HAV and the Havelock Community Shop were key trusted physical spaces on the estate; in Waltham, Friendship@Home and Waltham Library were key entry points for support; in Noel Park and West Green, the map highlighted the Haringey Over 50s Forum and Haringey Reach & Connect as important providers of digital support across Haringey; on the Eyres Monsell and Gilmorton Estates, trusted support was associated with the local community centres and Pork Pie Library.

However, BSM also showed that the existence of trusted Actors did not always mean that the system worked well: in multiple neighbourhoods, these Actors were constrained by staff capacity, funding uncertainty (e.g. in Horn Park), limited visibility, limited alignment and coordination across Actors (e.g. Waltham & Noel Park and West Green), and unclear referral pathways.

The effectiveness of coordination, shared knowledge and connections between Actors shaped how well residents could access and navigate support: BSM highlighted that unclear information or referral pathways limited residents' ability to find and act on support (e.g. on the Eyres Monsell and Gilmorton Estates, it was noted that social prescribing processes and channels differed across the neighbourhood). This is a good example of BSM adding value in terms of moving beyond simple asset-mapping: the method did not just identify who is present locally, it showed how trust, role clarity, capacity and coordination affect the effectiveness of available support. In addition to this, the BSM process itself helped to strengthen coordination by bringing stakeholders together, enhancing visibility of respective activities and opportunities to better align and connect local offers (a particularly prominent example of this is Waltham and the expansion of their Friendship@Home offer to a digital drop-in at the local church).

Official and / or informal support was not directly analysed spatially. Instead, proxy variables like low proficiency in the English language, living alone, and low educational attainment were used to gain an understanding of how likely an older person from the neighbourhood is to seek support. Some teams provided information on whether digital support was offered in local assets, this was also included in the interactive spatial maps alongside the location and proximity of the assets.

Important interactions

The trial highlighted important interactions at the neighbourhood level:

Social connection emerged as both an outcome of digital inclusion as well as a behavioural driver and potential route into engagement.

BSM suggests that digital inclusion is more likely to happen in conjunction with relational and social motivations rather than when it is framed around functional service access alone. Several neighbourhood maps showed that digital inclusion and social connection were closely linked. Digital engagement was not only about accessing services; it was also motivated by, and could contribute to, reducing loneliness, maintaining family contact, and increasing participation in community life.

This was especially apparent in the Waltham mapping process, where social connection was mapped as both a key motivation for engaging digitally and an outcome of successful inclusion - especially because of dispersed family networks and the high proportion of older, one-person households. On the Eyres Monsell and the Gilmorton Estates, workshop participants identified community activities and familiar social settings as opportunities for digital skill development before residents reach crisis points. In Horn Park, rebuilding trust and connection between residents was central to the system objective due to the lack of physical spaces and the resulting limited opportunities for both social connection and digital support.

The importance of social connection was further highlighted through community engagement: Social connection was referenced as a reason for using digital tools to stay connected to local people, assets and services for wellbeing purposes, including local shops, libraries, and groups. However, we also found instances of individuals citing a clear personal preference for in-person interaction. There was an awareness of how online and screen-time can take up a lot of people's time and control, thus presenting a conflict with social connection.

The value of social connection as part of digital support and interventions was also highlighted. There was less interest expressed for formal and top-down digital support, in the limited engagement undertaken, and more interest for support that has accompanying opportunities to meet and spend time with others who have similar needs and interests (e.g. Horn Park). This included using peer and informal networks that already work, to signpost or potentially host support. This was very neighbourhood- and individual-specific,

in how current routes or demand for connection could be part of support co-design and co-delivery, be central to it, or play a role in its promotion. Horn Park also highlighted the potential drawbacks in using rare spaces that are currently effective in providing social connection for digital support. There would need to be careful and considerate design of the support so as not to 'crowd-out' the venue's perception as a safe, familiar and informal space to spend time in for social connection.

Spatial analysis incorporated an assessment of social connection through proxy variables (e.g. older people living alone and the levels of English proficiency in the area). For example, social connection was found to be a high risk for Waltham due to the significantly high levels of older people living alone, car dependency, and assets located further away from the village. In Horn Park, the lack of a local community hub, low levels of bus accessibility, and high levels of significant health/disability challenges could also be seen as a risk to lower social connection amongst older people living there.

There are important interactions between individual health and wellbeing, local healthcare services and digital inclusion.

BSM highlighted that older residents often struggle to access and navigate digital health services - leading to avoidance, delay, or reliance on alternative support routes. Across Horn Park, the Havelock Estate, Waltham, and Eyres Monsell and Gilmorton Estates, behaviours such as difficulty booking appointments, managing prescriptions, or using tools like the NHS app were consistently mapped. On the Eyres Monsell and Gilmorton Estates, this included postponing or abandoning attempts after initial failure, while in Waltham, confusion across different local GP systems was noted as contributing to disengagement.

Health interactions were highlighted as opportunities to identify or address digital exclusion featuring explicitly in several intervention blueprints (e.g. Eyres Monsell and Gilmorton) but it was noted that these opportunities are currently inconsistently utilised due to lack of time or lack of assumed responsibility on the side of the healthcare provider as well as psychological limitations on the side of residents. On the Havelock Estate, several psychological barriers limiting sharing about digital inclusion needs with GPs (and therefore reducing referrals to other support pathways such as social prescribers) were recorded: for example, feeling rushed at GP appointments or social and cultural perceptions that digital or financial issues are not appropriate to raise with their GPs.

Structural and behavioural barriers within health services further limit their effectiveness as entry points into digital inclusion support: on the Eyres Monsell and Gilmorton Estates, the workshop group emphasised ambiguity around the remit of social prescribers and other health actors as an important barrier, contributing to the delay of escalation of digital exclusion issues.

BSM showed that health and wellbeing were noted to act as both a barrier and motivator for digital engagement. Poor physical health, mobility issues, and physical and mental health disabilities were consistently mapped as constraints on accessing both in-person and digital support. At the same time, improved health management and reduced social isolation were identified as potential motivating outcomes of digital engagement, particularly on the Eyres Monsell and Gilmorton Estates and in Waltham. This was further highlighted through community engagement, which surfaced several examples of health or mobility issues that increased dependence on digital access - to find out key information before planning an activity; to connect with family, friends, neighbours or local groups; and to access services (e.g. prescriptions) conveniently.

Some residents also expressed a key desire to keep themselves active and going to services whilst they were still able and to maintain that good practice for the longer-term, seeing this as important to their physical and mental health. For example, not using online shopping 'until I have to' or using the post office,

library and pharmacy services in-person ‘as it is good for me’. However, it was also raised that health or mobility issues made it increasingly important to have in-person support and connection. This connection was to help reduce isolation and improve wellbeing, such that an overreliance on digital was a key concern and fear for some.

Interestingly, residents may also rely on health-related support routes to compensate for other access barriers: in Horn Park, for instance, the Public Health team currently plays an informal bridging role (e.g. by organising health walks, undertaking information sharing) that partially compensates for gaps in formal infrastructure.

BSM revealed that healthcare is not just another service domain but a critical behavioural gateway into (or barrier within) the digital inclusion support system. It highlighted missed opportunities where health interactions could be used to identify and respond to digital inclusion, and showed how system design and communication within healthcare settings shape wider engagement behaviours. Spatial analysis displayed the locations of health/medical services key to each neighbourhood. These were overlaid by walking catchments for all and driving catchments where suitable to explore the physical access to this group of assets. Most areas have at least one health-related asset within the boundary or close by, while Noel Park and West Green and Havelock estate have no health/medical assets identified as key to digital exclusion and older people. This is not to say that there are no health/medical assets in the area but that none were identified in these BSM workshops.

Reflections on the Method and Its Application to Digital Inclusion

In this section we assess the extent to which BSM can support better understanding of digital inclusion of those aged 60+ at the neighbourhood-level.

Understanding system and individual-level factors and dynamics.

To what extent does BSM support improved understanding of the neighbourhood system for tackling digital inclusion for older people?

Benefit of hosting BSM in a neighbourhood anchor institution: all trials were hosted by leading local authority partners, with some workshops happening in local assets. A key benefit of this appears to be the convening power of each local authority partner in drawing together key neighbourhood stakeholders, and drawing in local authority officers from relevant teams within each authority. Stakeholder feedback highlights the resources required to undertake mapping, which is a key limiting factor to implementation of a participatory method - but having an established and resourced anchor/lead organisations helps to mitigate this risk, and provides a focal point to drive participation across neighbourhoods.

Bridging system-level factors and individual-level behaviours: the rationale for BSM for digital inclusion is that it has the potential to support a better understanding of the extent to which two levels of analysis are meaningfully brought together. This is evident in the neighbourhood maps developed in which individual behaviours, as described through COM-B, are represented as actor-behaviour nodes that have direct relationships with system-level drivers - for example individual fear of scams and a lack of local assets for community support. BSM appeared to support participants to reflect on the role of system-level drivers, and institutional actors - e.g. resource constraints on local government, rather than focus on the reasons why older people may avoid certain desired behaviours.

To what extent does BSM generate increased understanding of the nature of the neighbourhood system including types and roles of Actors, their relationships and relevant ongoing work?

Value of connection with other stakeholders across the system: participants across the workshop series recognised the value of spending structured time with others across their network reflecting and exploring digital inclusion of a specific neighbourhood. We found examples of stakeholders learning of existing or future service provision, sharing examples of challenges or opportunities they were facing through services, and re-establishing connections with key community stakeholders. Participants reflected on the value of this, for building understanding of the challenge, the issues faced by third sector partners, and the limitations of current approaches.

However, the extent to which this understanding reflects lived experience depends on the inclusion of resident perspectives. Where community engagement was incorporated, it helped to validate, refine, or challenge stakeholder interpretations, suggesting that BSM is most effective when used alongside mechanisms that bring in direct resident insight.

To what extent is BSM participatory and enabling of co-production?

Workshop composition appeared to drive the nature and structure of systems defined and interventions that resulted: Workshop composition differed across the trial neighbourhoods. For example,

neighbourhoods included different mixes of public health officers; digital inclusion leads and teams, adult education leads; libraries; community teams; and third-sector partners. There were instances of local political members playing a role in shaping maps - these stakeholders were able to provide clear examples of local case work or relevant examples that benefitted the process in the absence of direct engagement with older people.

However, there were clear instances of workshop composition driving the focus of maps - whereby teams that included public health composition appeared to produce leverage points and interventions which focused on health and wellbeing outcomes; whilst those consisting of adult skills experts included a heavy focus on local skills and training capacity. Whilst this focus does not appear to materially reduce the maps, the lack of diverse perspectives may limit the depth of insights on key Behaviours, Drivers and interventions, and limit the innovative or novel nature of solutions that could arise from the mapping process.

This highlights an important implication for future use: while BSM is participatory in design, participation within the trial was largely limited to institutional stakeholders. Expanding participation to potentially include residents in a meaningful way - either in separate but concurrent workshops or through other engagement methods - would strengthen the depth and validity of insights and support more genuinely co-produced intervention design,

To what extent does BSM enable co-design and collaboration?

Accessibility of the method: Overall, BSM demonstrates flexibility in supporting co-design and collaboration across different stakeholder groups. The hybrid approach to workshops (some online and some in-person) was not universally accessible, with some reporting challenges using the online mapping tool. However, each format accommodated different preferences and abilities and by understanding participants' preferences and potential barriers, sessions can be carefully designed to optimise inclusion. We experienced only limited technical barriers to participation of stakeholders. This means that, although some participants in our sessions faced access barriers, the method itself supports broad engagement and is flexible through adaptation to meet the needs of individuals. Overall workshops supported different organisations, teams and disciplines to participate in Behaviour mapping, and provided an opportunity for alternative perspectives to shape and influence attributes of the map.

The flexibility of the method means that the co-design potential can be extended beyond institutional Actors: depending on local capacity and readiness, BSM can be adapted to include parallel or embedded community engagement approaches, allowing different forms of knowledge to inform the mapping process at different stages.

Independent facilitation with technical expertise supported open discussion and co-production: Facilitation in this trial played several key roles for participants:

- Technical grounding of behavioural science and systems thinking was required for continued participation. Facilitation supported participants to learn-by-doing, and to undertake mapping in a way which encouraged learning from others.
- A mix of individual and group work benefitted the quality of insights generated throughout mapping. There were some limitations for participants who lacked the confidence to undertake individual tasks - which was apparent through only moderate engagement with reflection activities between workshops.

Each workshop group was provided the opportunity to review and redefine key terminology at the beginning of the mapping process. This supported groups to share their perspectives on key terms, their

meaning, and potential limitations or drawbacks to their adoption: e.g. whether terms could be exclusionary, could limit understanding among wider groups, or may not adequately reflect the attributes of their neighbourhoods. No participating groups chose to redefine or update mapping terminology, instead adopting terms defined through previous academic and policy studies.

In reflection through the evaluation exercise, some participants reflected on accessibility for future use of BSM, a key role being that of an independent facilitator and observer/ note-taker to enable the right questions to be asked and for the synthesis of inputs into the maps to be overseen with neutrality to reduce bias e.g. reflecting certain agendas.

Is BSM an effective method for tailored digital inclusion strategy and intervention design?

BSM is a method that supports what ICON describes as the *Neighbourhood Plan for Delivering Digital Inclusion* as outlined in recommendation 2 to the Ministry of Housing, Communities and Local Government and Department for Science, Innovation and Technology.[37] It has the potential to provide a strategy development method that supports co-design of strategies and interventions at the neighbourhood level which, if actioned, can support the requirement to move towards a holistic and evidence-based model of coordination and delivery.

This trial highlights that there are several potential factors that may limit the extent to which BSM can drive improvements in digital inclusion strategy or intervention design:

- System readiness: trial neighbourhoods consisted of a variety of stakeholder groups and across them there was appetite to explore and understand the local system, but there was moderate readiness for action. Systemic barriers were identified and presented as structurally difficult or impossible to shift (e.g. budget constraints) meaning whilst participants had highlighted major barriers, the action to overcome them was not clear. There was however a clear appreciation of these structural challenges and how they were presenting.
- Intervention ideas formed prior to the workshops drove intervention development: BSM tended to inform the development or refinement of pre-existing ideas. In these cases, knowledge generated through mapping was used to refine, update or confirm intervention concepts that were brought into the workshop process by participants. There were few instances of pre-existing intervention ideas being challenged as a result of BSM. Overall, there was limited innovation in interventions designed - however innovation was apparent when undertaking design around system leverage points. Participants were able to generate creative ideas and think out of the box. Co-production benefitted this process, meaning participants who are not usually involved in council-based intervention design were able to strengthen ideas.
- Validating interventions with relevant stakeholders is a key step that was limited during this trial: interventions that resulted from the BSM process were developed by workshop participants and refined by the research team. There was limited scope to validate the blueprints. This is a key next step to validate BSM outputs: for system-level interventions, testing with system stakeholders (e.g. Council teams and third-sector partners) will be important, e.g. to test the viability and resource requirements of delivery. Community engagement will be required to test individual-level interventions, to validate their utility, and ensure interventions meet the needs of their target cohorts.

These findings indicate that the effectiveness of BSM in informing strategy is closely linked to when and how it is deployed. Early-stage use, supported by upfront analysis and resident engagement, can help shape

[37] Independent Commission on Neighbourhoods (2025) *Hyperlocal Digital Inclusion.*

system understanding and identify appropriate leverage points; ongoing engagement, meanwhile, is critical for validating and refining interventions prior to implementation.

Benefits and limitations of using BSM to understand neighbourhood-level digital exclusion?

Benefits

Several benefits emerged from the trial:

A flexible and adaptable method that supports understanding of unique complex systems: A key benefit of using BSM to understand neighbourhood-level digital exclusion is its flexibility and ability to be tailored to a specific local context and problem. The method allows stakeholders to define a system around a highly specific neighbourhood challenge and map the Actors, Behaviours, and Drivers relevant to that context, rather than applying a fixed framework or national-level model. The mapping process itself is also adaptable in terms of delivery: this trial demonstrated that workshops can be run in hybrid formats and, in principle, could be delivered entirely offline using analogue methods such as printed templates and post-it notes. This makes the method particularly suitable for digital inclusion work, as it creates opportunities to involve digitally excluded residents directly in the mapping process; provided preferences and barriers are understood and accommodated

This flexibility also means that BSM can be deployed with or without complementary methods depending on local context. However, the trial suggests that combining BSM with spatial analysis and community engagement can significantly enhance its ability to capture both structural conditions and lived experience.

BSM has a strong narrative and visual focus, which complements rather than replaces quantitative data; for example, system objectives or priority Behaviours or Drivers can be informed by prior quantitative or spatial analysis, with the map then used to explain and explore the relationships and mechanisms behind those patterns.

It should be noted that a Behavioural System Map represents a 'point in time' and is inherently static in its format; however, appropriate guidance can provide ways to iteratively refine and update maps over time such that the dynamic nature of any system is acknowledged. Crucially, Behavioural System Maps should be seen as valuable 'snapshots' while also being treated as evolving resources that can be updated and expanded as new information emerges.

Limitations

However, there are also important limitations to consider:

Group composition shapes mapping outputs: While BSM by default takes a system-wide perspective, the content and structure of the map are inevitably shaped by the group of stakeholders who participate in the workshops. Composition therefore plays a role in determining which parts of the system are emphasised, meaning the map cannot represent all elements of the system. This can be a particular strength at neighbourhood level, where lived experience and local knowledge are highly valuable, but it also means that careful participant selection and validation with wider groups is often necessary.

In the absence of complementary data sources, there is a risk that maps overrepresent institutional perspectives or untested assumptions. This reinforces the importance of triangulating BSM outputs with resident insight and other forms of local data where possible.

Resource-intensive method that benefits from committed participants and access to expertise: the method can be resource-intensive; particularly when delivered through in-person or fully offline workshops, and it can be challenging to secure ongoing commitment from participants across a multi-workshop process (RBG). In complex systems in which resource constraints are a major factor, intensive participation

is unlikely - third sector partners have little capacity to be able to commit to ongoing work, even if the interest is there. Although efforts can be made to simplify terminology and reduce technical barriers, the mapping process and the resulting systems map still require a degree of time, facilitation, and cognitive effort both to develop the map and to later interpret it, which may limit accessibility for some participants and stakeholders (NELC)

Mapping generates both descriptive and normative behaviours which can create added complexity: Furthermore, it can be difficult to distinguish between descriptive (current) Behaviours and normative (potential or future) Behaviours - both during the mapping process and when interpreting the final map - as there is not always a clear line between the two. In this project, some workshop groups included potential or expected future Behaviours on the map whereas others focused on known current Behaviours, which may result in uneven leverage point identification across different groups.

Benefits and limitations of geospatial analysis and community engagement to support BSM

As outlined in the methodology, the programme was adapted to incorporate two additional data-streams to support the outputs of the BSM process. Below we outline the benefits and limitations of incorporating geospatial analysis and community engagement.

Benefits

The trial found several benefits to undertaking geospatial analysis and community engagement alongside BSM:

Geospatial analysis provided an additional level of insights on the socio-economic characteristics of the neighbourhood. The spatial analysis uses national statistics such as the Census and the Index of Multiple Deprivation, which reveal broad insights as to resident demographics and what they might be struggling with, for example health, geographic isolation, living alone. This can complement BSM as it situates Actors identified as driving digital inclusion/exclusion into a geographical context. Hence, it becomes easier to understand the proximity and accessibility of key actors and assets - drawing out information on their neighbourhood offer and revealing potential limiting barriers. Therefore, spatial analysis provides a base for stakeholders to begin identifying potential interventions where digital exclusion and its associated challenges, risks and opportunities are the highest.

Geospatial analysis supported understanding of intersectional factors that may impact digital inclusion. Geospatial analysis of open-source data can help to shift local stakeholder understanding of digital exclusion into geographic narrative of multiple data points. Data can highlight the intersectional nature of digital exclusion - recognising its prevalence when factors including age, poverty, and language overlap. Visualisation of these overlapping factors can help highlight the layering of risks - and at the granular LSOA or OA level can pinpoint pockets of deprivation. This information helps with highly targeted intervention design.

Community engagement provided rich insights as to the lived experience of older people who are digitally excluded: community engagement introduced rich data on the lived experience of older people that was missing from geospatial analysis and BSM. In several cases this information tested the assumptions of those mapping and validated maps. Following intervention design, the research team were able to use qualitative insights provided to complete missing detail to intervention concepts, validated and challenged assumptions - for example mobile phone ownership of older people (Ealing), the drivers for first steps of positive digital uses, and unexpected combinations of use and no-use within a common area - which helped to update Actor-Behaviour nodes, leverage points and interventions that resulted. This could become a more vital part of BSM in other applications.

Geospatial analysis enabled differentiation between capability and motivation versus digital infrastructure. We have found that in every neighbourhood there is at least one output area where residential properties have broadband speed of less than 10 mbit/s. This type of finding complements the BSM insights on motivation and capability of older people to access devices, and highlights an important dimension of digital inclusion that was not highlighted through BSM workshops.

Incorporating community engagement methods met the requirements of those mapping to enhance the voice of older people, and ensured that behavioural information led to actionable intervention outputs: A variety of resident engagement methods were used - including narrative "day-in-the-life" storytelling, and map review and reflection elements, in which parts of the BSM were shared with residents, and their feedback captured. By considering resident engagement as a valuable data source - as opposed to a workshop participant for whom to adapt the method - partners were driven to seek resident input in actionable ways. This was beneficial to neighbourhood partners who questioned how best to incorporate residents into the workshop environment given the limited resources and timeline available.

Taken together, these complementary methods provide different but interconnected forms of insight: spatial analysis offers a structural and geographic lens, while community engagement provides lived experience and behavioural validation. Their combined use alongside BSM enables a more complete understanding of neighbourhood digital inclusion systems.

***Limitations*:**

However, there are also important limitations to consider:

Community engagement that is not undertaken from the outset is difficult to integrate at later points during project delivery: a key limitation to the method trialled was the initial lack of community engagement resource, which was the result of limitations in programme time horizon. The initial scope of the programme was to enable BSM development through partnership work by key neighbourhood stakeholders - however part-way into delivery several neighbourhoods determined a need to integrate community engagement into the study to ensure community views informed and enabled the development of the behavioural system maps. There is a clear need for future BSM studies of neighbourhood systems (including those beyond digital inclusion) to ensure public participation is a central element of delivery, and that methods are designed to ensure engagement delivers information into the mapping process in an inclusive and ethical manner.

Geospatial analysis of neighbourhood digital inclusion relies on proxy indicators and does not directly measure individual digital skills, confidence, attitudes, or informal support networks. Indicators were used to determine likelihood of someone being digitally excluded if they experience certain challenges. For datasets that already target those aged over 60, a limitation is using LSOA or OA spatial boundaries, which, despite being the smallest area unit available, still aggregate people in a group and can hide individual differences, as multiple levels of digital exclusion will exist within the aged 60+ group. An improvement could be to collect or source local datasets, most relevant to the cohort, from organisations and institutions to enhance the planning and designing of interventions.

Geospatial analysis uses open-source data of different time horizons and categorisations, and may therefore risk misrepresenting data: open-source datasets are recorded at a point in time, so some of the more recent dynamics would not be captured fully. Also, a discrepancy in terms of publication date exists between the different data sources i.e. the Census was published in 2021, while the IMD in 2025. These differences are overall smaller but it is important to note them. There is also a risk of double counting individuals by combining different open-source datasets because they do not allow for cross-referencing across for our specific sample. This means that individuals might be counted as many times as the categories that are true for them. This is an issue that is common amongst composite indicators that rely

on open-data. To limit this risk, research and guidance on the topic, including OECD's handbook on composite indicators, suggests that it can be handled by testing for multicollinearity to ensure that no two variables are too similar in what they measure. This step was also implemented in this methodology; a Pearson correlation coefficient test was run in R to confirm that all variables had a correlation of less than 0.8.

Community engagement varied in scope and timing across neighbourhoods meaning impact on individual mapping processes varied. Where resident engagement succeeded it was planned and executed rapidly due to a recognised risk and limitation in the BSM method up front (Ealing)- whilst in other trial neighbourhoods longer lead times, and lack of immediate engagement resources meant that engagement was either less successful, or unable to go ahead. This limited the ability of some neighbourhoods to explore public attitudes and validate ideas coming from the mapping exercise. Engagement was also undertaken at different steps in the process - one neighbourhood was able to deliver engagement during Workshop 2, whilst others delivered engagement around Workshop 3 and 4. This meant the engagement was focused on validation and may not have surfaced genuinely new insights or experiences. The BSM approach trialled was constrained by time and resource availability, both which are key to planning and delivering effective resident engagement to inform and/ or complement BSM.

The variation in how and when these methods were applied across neighbourhoods suggests that their value is maximised when they are designed into the approach from the outset, rather than incorporated retrospectively.

Benefits and limitations of using the outputs of BSM to communicate about and action neighbourhood-level digital exclusion?

The Behavioural Systems Map

One of the primary outputs of the BSM process is the systems map itself, which visually represents the relationships between Actors, Behaviours, and Drivers within a neighbourhood digital inclusion system. This map can serve as a valuable communication and planning tool; however, its usefulness varies depending on the audience and purpose for which they are used.

The system map may be particularly useful when working with stakeholders who are directly involved in the digital inclusion system or who participated in the mapping process. For these groups, the map acts as a shared reference point that captures collective knowledge at the point of mapping about how the system functions. As such, it can support strategic discussions, the establishment of partnerships between different stakeholders, and intervention planning - by making visible how different organisations and services interact and where barriers occur. Crucially, the map should function less as a static output and more as a dynamic tool for ongoing reflection; and it should be updated accordingly.

The system map may also be useful when communicating the complexity of neighbourhood-level digital inclusion externally, for example in the context of funding applications or strategic planning involving senior decision-makers. Here, the map can help illustrate that digital exclusion is not the product of a single issue but rather emerges from complex Behaviours and interactions across services and individuals, thereby building understanding of why coordinated, system-level responses are necessary rather than isolated, individual-focused interventions.

However, the map may also be perceived as overwhelming, particularly for audiences who were not directly involved in the mapping process or who are unfamiliar with systems thinking or behavioural science approaches. Maps can easily become visually dense, so that without facilitation external viewers may find it

difficult to read the map or to interpret the Connections shown between the different elements. As a result, the map in its entirety may not always be the most effective communication tool for broader audiences such as residents or individuals and organisations with limited time to engage with the nuances of the material.

The Intervention Blueprints

In addition to the systems map, a second key output of the mapping process was the development of intervention blueprints for each neighbourhood. While the map captures the structure and dynamics of the local digital inclusion system, the intervention blueprints translate these insights into specific, actionable intervention proposals.

In order to explicitly link interventions to the system analysis and behavioural insights generated during the mapping process, the intervention blueprints highlight the leverage points within the system they address; alongside a short description of the intervention, its intended purpose, the system Actors responsible for delivery, the intended beneficiaries and the target Behaviours.

In practice, the intervention blueprints may often be more immediately accessible than the map itself: whereas the systems map helps stakeholders understand the system, the intervention blueprints directly speak to which actions could be taken within it; they therefore act as a bridge between system analysis and implementation. Consequently, the blueprints can be used to support business cases, funding applications, and service planning processes as a practical starting point for moving from ideas to implementation.

However, it is nevertheless important to recognise that intervention blueprints developed through participatory BSM workshops are inherently linked to the wider context of the map and are best understood as a result of them rather than an isolated resource - in other words, an in-depth understanding of the systems map enhances the ability to understand and evaluate the blueprints. Furthermore, while they are grounded in local knowledge and system analysis, they are typically at early stages of development and require refinement, feasibility assessment and pilot testing before implementation at scale. Additional work may be required to define delivery models, timelines, budgets and evaluation approaches; the blueprints should therefore be understood as structured intervention concepts rather than fully developed project plans.

Using BSM Outputs for Communication and Action

Together, the behavioural systems map and intervention blueprints provide complementary tools for communication and action. The maps help explain the system and build shared understanding of the digital inclusion landscape in the neighbourhood, while the intervention blueprints translate that understanding into practical proposals for change.

BSM outputs can support communication and action buy-in in several ways. First, they provide a shared language and framework for discussing digital inclusion: by distinguishing between Actors, Behaviours, and Drivers, stakeholders are able to have more structured conversations about where problems occur and what interventions might be appropriate; both within and beyond the BSM workshops.

Second, the mapping process and resulting outputs can help stakeholders understand how their own work fits into the wider system. Many participants reported that the mapping process helped them identify or better understand connections between organisations and services whose exact roles and remits they were not previously familiar with. Enabling this systems-level perspective on the neighbourhood digital inclusion system can therefore build a sense of shared responsibility and encourage more collaborative approaches to digital inclusion.

Third, the identification of leverage points and the subsequent development of intervention blueprints provide a practical bridge between system analysis and implementation. Rather than attempting to address a complex and varied issue such as digital exclusion in its entirety, stakeholders can focus on specific Behaviours or Drivers that were identified as both pivotal within the system and feasible to influence locally.

However, as noted above, it is important to recognise that while systems maps can be used for both internal and external communication, they may not always be effective as a standalone tool; especially as the complexity of the maps often makes them difficult to interpret for those who were not directly involved in the mapping process without additional context or explanation. As a result, their use may be most effective when supported by supplementary materials (e.g. written out cluster summaries, intervention proposals, or narrative walkthroughs) to help explain important behavioural pathways and highlight the most relevant insights. In doing so, the map would remain a central reference point, while the supplementary materials act as vehicles for communicating its insights more clearly to different audiences.

Finally, it is worth noting that the mapping process should be considered a valuable output in and of itself: the workshop series built shared understanding and relationships among workshop participants, which can be a critical component for implementing coordinated action; the maps and intervention blueprints then act as artefacts that capture and support this shared understanding over time.

The need for guidance and a toolkit

A key learning from this project is that BSM is not only a workshop method but a broader process that requires guidance, facilitation, and supporting materials. The success of the method depends heavily on how workshops are structured, how concepts are explained, how maps are synthesised between workshops, and how outputs are translated into interventions and implementation plans. Feedback from evaluation interviews and post-workshop discussions consistently indicated that while participants valued the method and its outputs, many felt they would not yet be able to replicate the process independently without further guidance and structured materials.

Several areas highlighted the importance of preparation and organisational readiness prior to beginning the mapping process. Participants noted that more upfront time would be useful to understand the scale and nature of digital inclusion locally and determine which stakeholders should be involved in the workshops. In particular, partners emphasised the importance of early stakeholder engagement and ensuring that participants understood the purpose of the process, their role within it, and how the outputs might be used going forward. These reflections suggest that future applications of BSM would benefit from clearer guidance on defining objectives, identifying stakeholders, and undertaking preparatory work such as spatial analysis or local insight gathering before the first workshop takes place.

Another aspect frequently raised in evaluation discussions concerned the synthesis and analysis work taking place between workshops: many participants noted that while they understood the workshop activities by themselves, the process by which workshop outputs were synthesised into system maps, behavioural clusters, and draft intervention proposals was less visible to them. As a result, participants expressed concerns that the analytical and synthesis stages would be particularly difficult to replicate without detailed guidance; highlighting that a toolkit needs to include information on workshop facilitation as well as on qualitative analysis, synthesis, and map refinement between workshops.

Similarly, participants noted that while intervention blueprints were useful outputs, additional guidance would be helpful on how to take these ideas forward into piloting and testing - for example, guidance on refining intervention proposals using established models such as APEASE, testing ideas with residents,

revisiting the systems map following intervention delivery, and using the BSM approach as part of an ongoing evaluation and system learning.

In summary, these reflections suggest that for BSM to be applied more widely and independently by local authorities or community organisations, there is a clear need for structured guidance and a practical toolkit. Such guidance should not only explain how to run workshops, but also:

- Pre-workshop preparation
- Stakeholder engagement
- Synthesis and analysis between workshops
- Post-workshop use of the systems map
- Development and refinement of intervention blueprints
- How the method can be revisited as part of ongoing system development.

The development of guidance and a toolkit will help position BSM not only as a research or engagement method, but as a practical planning and partnership tool that can be used by local stakeholders to understand and address complex challenges such as digital exclusion at neighbourhood level. It should also include guidance to help local areas determine when and how to integrate complementary methods such as spatial analysis and community engagement; and how to adapt the overall approach based on local capacity, data availability, and system readiness.

Deploying BSM and complementary methods in practice

Across the trial, a consistent finding was that BSM is most effective when applied as a flexible and adaptive approach rather than a fixed methodology. BSM can be used as a standalone method to generate structured insight into local systems; however, its value for a neighbourhood use-case is significantly enhanced when complemented by spatial analysis and community engagement, which provide critical context on structural conditions and lived experience. The appropriate combination and sequencing of additional methods will depend on local factors such as system readiness, availability of data, existing relationships with communities, and overall resource capacity.

In practice, this suggests a staged and iterative approach to mapping neighbourhood systems that includes upfront analysis and engagement, can support initial system understanding and help identify priority Behaviours and Drivers, while ongoing engagement is essential for validating assumptions and refining interventions throughout the process. Importantly, the trial highlights that community engagement should be designed into the process from the outset wherever possible - rather than added retrospectively. Overall, BSM should be understood as a flexible tool that can be tailored to different neighbourhood contexts, enabling local partners to combine methods in ways that are feasible and responsive to the specific challenges they are seeking to address.

Policy value / implications of the method

BSM is a method that supports what ICON describes as the Neighbourhood Plan for Delivering Digital Inclusion as outlined in recommendation 2 to the Ministry of Housing, Communities and Local Government and Department for Science, Innovation and Technology.[38] BSM provides a strategy development method that supports co-design of strategies and interventions at the neighbourhood level which, if actioned, may

[38] Knight, S. (2025) *Hyperlocal digital inclusion: a report for the Independent Commission on Neighbourhoods.* ICON.

support ICON's requirement to move towards a holistic and evidence-based model of coordination and delivery.

At policy level, the BSM trial suggests that neighbourhood-level digital inclusion cannot be addressed effectively through one-size-fits-all programmes or a narrow focus on digital skill development alone. The findings show that digital exclusion among older residents is shaped by different combinations of service design, social connection, local infrastructure and support capacity, and that these combinations vary significantly between places. The policy implication is that national and local strategies should create the conditions for locally tailored behavioural diagnosis and response: combining neighbourhood insights, resident engagement and cross-sector collaboration to identify the specific behavioural pathways that sustain exclusion in each area. BSM offers policy value not just as an analytical tool but as a practical way of translating broad digital inclusion plans into specific, locally grounded priorities, shared ownership across organisations, and intervention blueprints that are more likely to reflect how digital exclusion is experienced on the ground.

At the same time, the trial also indicated that the policy value of BSM depends on investment in the conditions that make the method usable and actionable. If neighbourhood-based digital inclusion is to become a more embedded part of policy-making and delivery, local areas will need sufficient time, facilitation, data, community engagement and capacity to move from mapping to implementation and review. This points to an important role for policy in enabling neighbourhood systems to act: it should support key system Actors, encourage coordination across local authorities, VCSE and community partners, and healthcare institutions, as well as recognise resident involvement and validation and iterative learning as core parts of strategy development rather than optional steps. Used in this way, BSM can help shift policy away from fragmented, removed responses towards a place-based and evidence-informed model of digital inclusion delivery for older people.

Conclusions and recommendations

Conclusions

This trial of Behavioural Systems Mapping (BSM) set out to understand whether BSM could be adapted to understand digital inclusion of people aged 60+ at the neighbourhood level. The findings demonstrate that BSM can be effectively adapted for this purpose, and provides clear added value as both a diagnostic and design tool for place-based digital inclusion.

In trialling BSM, participating neighbourhoods looked to explore whether the methodology would lead to actionable intervention blueprints, and the extent to which future strategy and intervention design may benefit from the approach. Overall, BSM was shown to have significant potential to neighbourhood stakeholders, and for some was considered a valuable strategy and design tool, which has the added benefit of bringing stakeholders together to collaborate, build shared understanding and undertake important co-design work.

Several aspects of the methodology stood out from the trial: BSM revealed that superficially similar digital inclusion challenges across neighbourhoods are driven by distinctly different underlying behavioural systems, which was further emphasised when triangulated with geospatial analysis and direct community engagement. Furthermore, while spatial data provided important contextual spatial insights on infrastructural and demographic barriers (e.g. poor broadband connectivity, lack of nearby community assets), BSM explained how residents affected these barriers, and potential resulting actions. Community engagement further added valuable narrative as to how older people experienced these barriers and the resulting individual impacts. Taken together, this demonstrates that a multi-method approach is required to fully understand and address digital exclusion.

Insights were also specific to the cohort in question. We found established patterns of older residents delaying or disengaging from digital services due to a compounding mix of fear, poor service design of digital services, and fragmented institutional support from the private sector, NHS, councils and the third sector. Importantly, these behaviours are not solely driven by individual capability but by system-level factors that shape opportunity and motivation. BSM also highlighted that interventions that result are contextually aware - for example in Horn Park, the priority is rebuilding foundational trust and physical community spaces, whereas in Eyres Monsell and Gilmorton, the priority is re-designing existing skills support to be responsive and tailored to behavioural barriers (e.g. shame).

Trialling with additional methods also highlights some key limitations of BSM: whilst BSM revealed stakeholder understanding of their neighbourhoods, validation through community engagement was vital to test assumptions. When interventions were stress-tested, nuances emerged that were otherwise missing from the maps; this indicates that BSM should be used alongside rather than instead of direct resident engagement The methodology used also generated highly complex maps that at times were difficult for stakeholders to engage with, which may limit accessibility and scalability without further simplification or audience-specific tailoring of the outputs. Mapping in the future should be more focused on specific challenges or groups of interest. Broad system objectives and challenge statements appear to significantly limit the practicality of resulting maps.

That said, BSM appeared to generate actionable interventions that aligned with the needs of stakeholders and their neighbourhoods, particularly when supported by mixed-methods data and expert facilitation.

Furthermore, BSM highlights that trusted and knowledgeable place-based actors and accessible service design are just as critical to digital inclusion as broadband speeds or device affordability. This suggests that digital inclusion policy and funding should move beyond generic, skills-centric provision towards holistic, place-based approaches that address the wider system of barriers; building confidence and capability through trusted actors, relevant use cases, and ongoing support. This trial shows that BSM is a tool that is well placed to support this.

Recommendations

Recommendations for Digital Inclusion programmes

The following recommendations are made to support the Government's continued work as outlined in the Digital Inclusion Action Plan 2025 - and in particular action three of the Digital Inclusion Action Plan - One Year On: "Strengthen effective digital support in local communities, applying what we have learnt."[39]

Recommendation 1: Local networks should be supported to adapt and deploy BSM within their neighbourhoods and communities and share learning to support further development and adaptation of the method.

This trial has highlighted that BSM can bring several key benefits to networks of key neighbourhood stakeholders, including increased connection and collaboration, recognition of the complexity of local digital inclusion systems, and a deeper understanding of the behavioural drivers underpinning digital exclusion. It also supports the development of more targeted, locally relevant interventions by aligning stakeholders around a shared systems view.

There are, however, improvements that need to be made to the methodology, which should be supported through an open and iterative approach to method design by community stakeholders. Future work should continue to test and refine the method across different contexts, supported by ongoing evaluation of its impact and effectiveness (Recommendation 2). Support should include dedicated funding, practical guidance and toolkits, and mechanisms for peer-learning and knowledge-sharing across areas to enable consistent application and continuous improvement of the BSM method.

Recommendation 2: Evaluation and impact assessment should be undertaken on policies and innovations that result from BSM.

This trial did not test the nature or quality of policies and interventions that resulted from BSM. Whilst we have collected anecdotal feedback on some interventions (e.g. from community engagement) their effectiveness or impact has not been assessed. We are therefore unable to comment on the value of BSM in generating novel interventions, nor do we understand their value in comparison to established and widely accepted interventions including device lending and peer-to-peer training programmes. Future trialling of BSM within the digital inclusion domain should incorporate extensive intervention impact evaluation - and where possible include comparative assessment against established methods.

Recommendation 3: Geospatial analysis and community engagement should form the basis of early work to define neighbourhoods and provide system-level insights to support BSM.

For BSM of digital exclusion in complex, place-based systems, we found significant value in triangulation and validation through the analysis of spatial data. Future work should look to incorporate spatial analysis earlier to inform and prepare for the Behavioural System Mapping. This would help stakeholders to set

[39] Department for Science, Innovation and Technology (2026) *Digital Inclusion Action Plan: On Year On.*

clearer objectives, to understand potential scale, and to gather relevant information from relevant local Actors to complement the open-source data. Geospatial analysis will also support neighbourhood selection, providing a clearer rationale and methodology at the start, ensuring that neighbourhood definitions and analysis plans are established early in the process. Doing so will also mitigate against the risk of neighbourhood selection of neighbourhoods of different sizes - this trial included neighbourhoods of one LSOA through to 16 LSOAs, meaning significant variation in population size and relevant factors. Whilst this study did not undertake comparison analysis, future studies which wish to should look to define neighbourhoods early through spatial assessment.

Community engagement also provides a valuable source of data on the lived experience of communities that can generate rich insights to teams using BSM. Future applications of BSM in the digital exclusion domain should look to incorporate up-front engagement and data analysis to provide insights which can inform and drive the mapping process. Doing so would mitigate against potential bias of those mapping, and could fill any information gaps or challenge assumptions before mapping begins.

Recommendation 4: Digital inclusion policy and funding should move beyond generic, skills-centric provision towards more holistic, locally tailored approaches that reflect the wider system of barriers people face.

The trial shows that digital exclusion is often not primarily driven by a lack of skills but by a combination of behavioural, structural, and contextual barriers, including low trust, limited awareness of support, accessibility challenges, and a lack of relevant entry points for engagement. As a result, generic skills or device provision alone is unlikely to be sufficient to drive sustained change. This aligns closely with the Digital Inclusion Action Plans focus on driving activity that directly meets the needs of disadvantaged communities, whilst recognising the complex system in which interventions are designed, delivered and evaluated.

Policy and funding should therefore prioritise approaches that build confidence and capability through trusted local actors - drawing on their deep knowledge of their local context and communities - relevant and motivating use cases such as healthcare, and ongoing, embedded support within community settings. This reflects a shift from standalone skills provision to strengthening local systems that can enable people to engage with digital services in ways that are meaningful and accessible to them.

Recommendation 5: Future studies could establish connections with local partners and more formal information requests to allow for local data sharing.

While the current Information Request was valuable in sharing knowledge about the attributes of local assets and other key information, a standardised, formal Information Request to organisations beyond anchor institutions such as councils would ensure more granularity across all neighbourhoods. In future studies, if other spatial data is sourced, this could move beyond the census boundaries and help further tailor the interventions proposed.

Data sharing through local community-based mapping may also be of benefit to researchers. The use of digital platforms for communities to build, review, and validate maps of assets, important cultural or historical spaces, access points, would also benefit future applications of BSM. This approach may support BSM by providing data that can be more easily included into maps, without over burdening public participants with a complex BSM task or activity.

Recommendations for using BSM

Recommendation 6: Neighbourhood-level BSM within the public sector should utilise public engagement at every stage of the mapping process, integrating diverse non-expert perspectives throughout the methodology.

Public sector teams that participated in this trial took different approaches to public engagement, but all were clear on its importance to the method being trialled. Whilst the initial scope of this study did not include public engagement, the mapping process - including participants' understanding of the system - and the resulting maps and intervention blueprints all benefitted from the input of older people. For policy challenges that have a clear problem-space and associated publics, direct involvement with those groups should be a central element of the methodology. Further trials should explore the most effective ways to integrate community perspectives at different stages of the process, from early-stage data input and validation of assumptions through to testing and refining intervention blueprints

Recommendation 7: BSM should be applied to clearly defined system challenges to ensure outputs remain actionable.

The trial found that system objectives were often ambitious and system boundaries were difficult to define. This contributed to the development of large and complex maps, which was further amplified by the fact that system objectives and boundaries were only sporadically revisited during the process. As a result, maps may become very rich in information, but less effective as practical tools for identifying intervention points.

Future applications of BSM should therefore prioritise early and strict definition of system objectives and boundaries, alongside structured opportunities to revisit and refine them throughout the workshop series. This will help maintain focus, manage complexity, and support the development of more usable maps and more targeted, feasible interventions within the local systems.

Recommendation 8: BSM should be treated as an iterative process, with maps and interventions continuously refined as new insights emerge.

The trial showed that system understanding evolved significantly throughout the mapping process, particularly as new stakeholder input, spatial, and resident engagement evidence were incorporated. Behavioural System Maps are not intended to provide a complete representation of a system but rather to capture useful and actionable insights about key actors, behaviours and drivers at a given point in time. As such, static outputs risk becoming outdated or misaligned with real needs, particularly in complex and constantly evolving neighbourhood contexts.

Future applications should therefore treat BSM outputs as living artefacts, with mechanisms in place to revisit and update system maps and intervention ideas over time. This will support more adaptive and responsive approaches to digital inclusion, aligned with changing local needs and conditions.

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