

# Loti

## Mapping digital exclusion in London

### A toolkit for London boroughs

Developed by



**GREATERLONDONAUTHORITY**

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## Introduction

Digital exclusion is an enormous problem for millions of people in the UK. There is a digital divide affecting up to 12.6 million of the adult UK population who lack basic digital skills. An estimated 5.8 million people have never used the internet at all. This digital skills gap is costing the UK economy an estimated £63 billion a year in lost additional GDP<sup>1</sup>.

Being digitally excluded limits participation in many aspects of life including access to more affordable cheaper goods and services, and council and government services.

In January 2021, LOTI funded five London boroughs to work collaboratively on a data solution to develop a better understanding of digital exclusion across the capital.

This work to develop this toolkit builds on existing work conducted by Westminster. In the last quarter of 2020, Westminster undertook a needs assessment to establish the extent and nature of digital exclusion in the borough.

Using £75,000 from the LOTI COVID Innovation Fund, the London boroughs of Westminster, Kensington and Chelsea, Brent, Barnet and Southwark worked collaboratively, bringing together Digital Inclusion Leads, Geographic Information System (GIS), data and demography expertise to build a toolkit to help all boroughs map digital exclusion across London.

The toolkit includes:

- a pan-London map that uses open datasets and provides the starting point for boroughs wanting to get a local view on digital exclusion
- a set of personas that can be used in designing services for digitally excluded residents.
- examples of research approaches that can be used to develop a more sophisticated understanding of the specific needs for different digitally excluded groups

There is also an explanation of how each of the tools was developed and how they can be used by individual boroughs.

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<sup>1</sup> Science and Technology Committee., Digital Skills Crisis, House of Commons, 2017.

## Understanding digital inclusion

Digital Inclusion refers to the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of technology. This includes five elements:

- 1) Affordable, robust broadband internet service
- 2) Internet-enabled devices that meet the needs of the user
- 3) Access to digital literacy training
- 4) Quality technical support
- 5) Applications and online content designed to enable and encourage self-sufficiency, participation and collaboration

Digital Inclusion must evolve as technology advances, and requires intentional strategies and investment to reduce and eliminate historical, institutional and structural barriers.<sup>2</sup>

## Purpose of the toolkit

The core purpose of the toolkit is to support boroughs to understand and replicate the process for tackling digital exclusion.

By sharing how the pan-London map and persona bank have been created, boroughs will be able to use them, build on them and bring their own local experience and data to create a nuanced view of digital exclusion in their area.

To be successful, boroughs must understand the complex landscape, differing needs, drivers and barriers. There are many barriers to remove, at both an individual and structural level and this toolkit will help work through the process.

## Who the toolkit is for

This toolkit is for digital inclusion leads or similar in London boroughs. While it has been developed based on the experience of five London boroughs, the approach is equally applicable for local authorities in other parts of the UK.

The pandemic challenged local authorities to work in new and innovative ways, promoting collaboration across services and with external partners. Partners who have come to the fore include the NHS at a local and regional level, as well as the voluntary and charity sector. This toolkit has also been developed with them in mind, to support them to gain a better understanding of the extent of digital exclusion and what support they can provide.

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<sup>2</sup> National Digital Inclusion Alliance

## Pan-London map for digital exclusion

### Introduction

The pan-London map for digital exclusion (the map) is a powerful tool and potential starting point for digital inclusion leads and service designers looking to understand and tackle the size and scale of digital exclusion in communities. It is an interactive demographic map that in combination with the other resources in the toolkit can be used to build a nuanced understanding of digital inclusion needs.

The map uses a number of publicly available datasets selected by the five boroughs and compiled by the Greater London Authority (GLA). The map shows common community demographics and characteristics that have been identified through research as the key factors or proxy indicators to the propensity for digital exclusion.

The map is hosted on the GLA's Esri Geographic Information System (GIS) online platform. The map is interactive and has expandable layers based on the open datasets. By using these data layers, it becomes possible to see the landscape of the local population to better understand where groups most at risk of digital exclusion are likely to be located.

The main strength of the map is to provide access to interactive GIS mapping ability for boroughs wanting a quick start and voluntary and community sector organisations that have limited in-house mapping capabilities. The map will also provide a pan-London perspective, allowing boroughs and organisations to compare, contrast and collaborate.

This type of mapping approach is restricted to publicly available datasets and their intrinsic limitations. Best practice is to use the map as a base and to combine the datasets made available here with more specific locally available data and local service knowledge. This can be achieved by downloading the datasets published by the GLA into local GIS platforms.

The map shows the main borough boundaries for context. However, the data can be applied locally; the analysis and reporting can be made more granular depending on the data available e.g. ward level. It should be noted that the map is only using high-level aggregated datasets that do not contain any individuals or personal data and this cannot and should not be used for individual or highly localised targeting or profiling.

### Understanding key groups

The map includes open source and publicly available datasets that identify key groups likely to be digitally excluded, as identified through Westminster digital exclusion research. This research reviewed national and local trends in terms of

digital exclusion, together with interviews with key council services and residents to obtain deeper insights as to the key factors and barriers to digital exclusion.

The research identified the following key groups as having a higher propensity to be excluded:

- Older people
- Low income families
- Ethnic communities – *especially Bangladeshi families in low-income households*
- Unemployed
- People with disability or other vulnerabilities (e.g. *mental health issues*)
- Small and micro businesses - *who may struggle to get their businesses online, or conversely in seeking and obtaining skilled workforce locally as they grow.*

These key groups reflect the general findings from national research of the groups associated with increased digital exclusion, albeit the levels and proportions may vary locally across and within boroughs.

From interviews with communities and services, small and micro businesses (SMBs) were deemed vulnerable to exclusion as the pandemic exacerbated the need for them to go digital and have an online presence. They tend to be less financially resilient than larger corporations and are less likely to have an ecommerce presence. Westminster's map showed that SMBs were also concentrated in areas identified as those having the most potentially digitally excluded residents.

Westminster's full research methodology and findings can be found in the appendix.

### **Datasets used in the mapping**

After identifying the key groups, these were then mapped out using the different datasets which showed where these groups were in the borough, to be able to target and tailor interventions.

Key open-source datasets included in the map which are available nationally are:

- Census data – *for key age and other population information (2011). We expect the revised Census 2021 data to become available, from Office for National Statistics (ONS), in early 2022;*
- Broadband connectivity - *Not-spot / slow-spot data for each postcode (OfCom);*
- Indices of Multiple Deprivation - *the sub-domains for 'Employment', 'Income Deprivation Affecting Children' and 'Deprivation Affecting Older People' were most useful*
- Employment - *Job Seekers Allowance claimants (Department for Work and Pensions (DWP));*

- Disabilities - (*Small Area Mental Health Index; Disability Living Allowance (DWP);*
- Free school meals (*Department for Education (DfE)*) and;
- Small and Micro Businesses (*ONS*)

## Access to datasets

Borough GIS teams can access all the datasets used on the map plus the ONS Hard to Count Index. A full list is provided in the appendix. For boroughs with limited GIS capabilities, the GLA can provide password protected versions of the pan-London map with non-public datasets mapped.

## GDPR assessment

To mitigate risks and concerns with using data to create the map, we carried out a Data Protection Impact Assessment and confirmed that there were no significant data compliance risks posed.

## Data ethics considerations

We wanted to make sure that we had thought about the ethics of using the data for the map, the survey work and interviews described below. We reviewed data ethics frameworks and decided to use the government's Data Ethics Framework to consider transparency, integrity and the fairness of using data.

This work was presented to Brent's Data Ethics Board and the Board members agreed we didn't create any major risks or concerns. They provided some useful advice to:

- Think about how thresholds are used so that groups, individuals or geographic areas are not being unfairly selected or excluded.
- Take care not to make individuals directly identifiable from the data, particularly where there are small cohorts involved.
- Review activity to date to ensure decisions are transparent, have integrity and are fair.
- Encourage those who use the toolkit to carry out an Equalities Impact Assessment for interventions made based on mapping insights.

## Validation

The GLA provided access to the datasets (via private connection on the London Data Store) used in the map to the five boroughs involved in the LOTI project. This allowed each borough to download the datasets via GeoPackage or Geodatabase and compare the GLA's datasets to locally available datasets that may not be able to be shared due to data privacy regulations. Through this process, the five boroughs were able to validate the GLA methodology for data included in the map.

One shortfall for this data validation was a lack of available and pertinent local datasets that could be used to compare with the GLA data. The most useful local

dataset in Westminster's analysis was the Low Income Family Tracker (LIFT), but not all boroughs have access to this dataset.

### **Building a richer local map of digital exclusion**

The map is a good starting point to identify potential areas with needs, and provides a pan-London as well as a borough view.

By combining the national open data sets with local data it is possible to better understand which groups are most vulnerable to digital exclusion and where they are in the borough.

Locally held datasets could be brought in when planning and designing for specific interventions to meet specific citizen and community needs.

For example, Westminster carried out a survey that revealed over 17,000 residents aged 16+ are digitally excluded in the borough. Further qualitative research undertaken with frontline services showed that older people, those in lower socioeconomic households and people with disabilities are most likely to experience digital exclusion.

Westminster also used additional local or commercially available restricted data to get a richer and more localised view of the extent of digital exclusion in the borough. These include:

- Westminster Annual City Survey (2020)
- Hard-to-Count Index (ONS)
- Acorn Data (CACI) consumer segmentation data

There are examples of datasets that can provide useful insight into digital exclusion in the tables below.

**Borough-held datasets**

	<b>Dataset</b>	<b>Why use it</b>
<b>1</b>	Resident surveys	Local knowledge based on borough annual survey that can be linked to the facets of digital exclusion (connectivity, access, skills, motivation and trust).
<b>2</b>	Low Income Family Tracker (LIFT) - Pension aged residents, Disability and Residents with one or more children	<p>This data includes households who receive council tax support or housing benefit (note those in receipt of other benefits are not captured).</p> <p>The more detailed spatial resolution of this data can also help to target interventions in specific locations. In special circumstances, it may also be possible to use this data to directly contact individuals who we deem to be most at risk of digital exclusion.</p>
<b>3</b>	SME - Percentage of Micro (0-9 employees) of all businesses	Micro to small businesses are considerably more likely to face digital exclusion. They tend to be less financially resilient than larger corporations and are less likely to have an eCommerce presence.
<b>4</b>	SME - Percentage of Small (10-49 employees) of all businesses	Micro to small businesses are considerably more likely to face digital exclusion. They tend to be less financially resilient than larger corporations and are less likely to have an eCommerce presence.
<b>5</b>	Housing Estates	To identify locations of Housing Estates for interventions/disseminating information. Also useful to help coordinate projects like negotiating with Broadband suppliers.
<b>6</b>	Family hubs, youth clubs, special needs schools, adult education, community organisations, libraries	Location of Services that can be used for future planning and interventions. Also, it aids visual assessment of the likely catchment area of these resources.
<b>7</b>	Disability, Mental Health and Day Services	Location of Services that can be used for future planning and interventions. Also, it aids visual assessment of - the likely catchment area of these resources.
<b>8</b>	Homeless Shelters Outreach Service	Location of Services that can be used for future planning and interventions. Also, it aids visual assessment of - the likely catchment area of these resources.

## External datasets

	<b>Dataset</b>	<b>Source</b>	<b>Why use it</b>
<b>1</b>	Indices of Multiple Deprivation (IMD) 2019	London Data Store	Understand spatial distribution of deprivation.
<b>2</b>	Percent of population over 65 - 2018	ONS Census	This age group was considered - likely to be digitally excluded.
<b>3</b>	Ethnicity Data	ONS Census	Focus on communities who may be potentially more excluded than others.
<b>4</b>	Population Density (LSOA) - 2018	ONS	
<b>5</b>	Not Spots – Broadband coverage by Output Area	Ofcom	To identify areas with poor broadband speeds i.e less than 30 Mbits per sec.
<b>6</b>	Internet User Classification	Consumer Data Research Centre	Open dataset that we used as additional information (or to cross check our findings) on local Internet user habits.
<b>7</b>	ACORN	CACI	Socio demographic data to help narrow down - groups liked to be digitally excluded.
<b>8</b>	Mosaic	Experian	Socio demographic data to help narrow down - groups liked to be digitally excluded.

## Limitations of the datasets

The pan-London datasets are based on high-level open-source data. The datasets were not designed from the perspective of digital inclusion / exclusion, rather they are generic and act as proxies to aspects and characteristics that have been shown to be related to potential digital exclusion barriers, through detailed qualitative research nationally and locally.

It is important to note the risk of using multiple datasets; one of which is double counting by combining different datasets. The result of chosen datasets not allowing for cross-referencing across the three cohorts could result in not revealing where an individual may appear twice e.g. an individual might be both over 60 and living in poverty.

Additionally, some datasets are not up-to-date e.g. ONS population data. This may result in assumptions being made that population distribution had not significantly changed over the past ten years (since the last Census in 2011).

## Using the map

Applying the layers on the map relating to each key group will help to identify where people in these key groups might live in a borough. Combining datasets on the map will give an indication of the concentration of a number of needs in a specific area.

It is important to understand that the map shows approximate locations where the key groups are in the borough. In practice, each key group can have multiple differing combinations of needs and tailored approaches. It is important to factor the local needs of each group, as well as specific needs of the individuals within the groups, for an effective programme to reduce digital exclusion..

In addition, each key group will also have sub-groups and a further tailoring and targeting of support will be needed. For example, over 65s in deprived areas may have different digital exclusion barriers and digital needs from those in more affluent areas in the borough (in terms of connectivity and devices) but may have similar needs in terms of digital skills and building trust. This is where a combination of multiple data sets plus local understanding of the demographics and characteristics will be very useful in developing tailored interventions.

## The persona bank

### Introduction

Personas are archetypes that represent the key traits of a segment of people who are digitally excluded. Persona research is important as it enables us to understand the needs, experiences and barriers to digital inclusion from a person-centered perspective. This knowledge can then be used to develop initiatives to tackle digital exclusion.

The bank of 24 personas developed by Westminster can be used by boroughs and others when developing initiatives for people who are digitally excluded. While some boroughs have already validated the personas, it may be helpful when starting out, to repeat this process with key service representatives e.g. adult social services, libraries, or housing, to determine the extent to which these personas are relevant.

If there are significant differences or there are key personas missing, then new personas should be created which reflect specific local populations.

### How to create digital exclusion personas

From the pan-London digital exclusion map and the national and local data on digital inclusion (including our City Survey which revealed the extent of digital exclusion in the borough), we had a good understanding of the groups of residents and businesses that digital exclusion affects. What we do not know from this data is how digital exclusion affects people and how they can be helped on their journey towards digital inclusion if that is something that they want to do.

We carried out a series of persona interviews to understand how digital exclusion is experienced and the range of and extent of help required to enable residents to become more digitally included.

### Methodology

In order to identify personas that were relevant to digital exclusion in Westminster, we undertook a four-stage process:

1. We reviewed national, regional and local data to capture identify the demographics, attitudes and behaviours of digitally excluded people against the prevalence of these groups in the borough
2. We created a 'straw man' of personas from the national, regional and local data
3. We shared the 'straw man' personas with our Strategy & Intelligence and Policy teams and refined them using their input
4. We then conducted one to one interviews with internal service representatives e.g. housing, adult social services, children's services and external stakeholders (e.g. voluntary and community sector organisations) to get input into these personas and subsequently refined the list of personas

We developed 24 personas from this process and the details of these are listed below. Due to timing constraints in recruiting participants a total of 20 persona interviews out of 24 were conducted. The personas with an \* were not conducted. You can view a more detailed step by step process below.

### Step 1 - Stakeholder interviews

We carried out interviews with 19 services including children and youth services, adult services, employment, education services, regeneration housing, digital connectivity, business service, homeless service, technology and public health. The interviews served several purposes:

1. To understand the main types of residents who are affected by digital exclusion
2. To understand the way digital exclusion affects the residents they are in contact with
3. To receive feedback on the straw man proposed digitally excluded personas
4. To understand the initiatives currently underway to help the residents they work with

### Step 2 - Finalising list of personas

Following the interviews, the persona details were updated, and a final list agreed by councillors can be seen below. More information on the rationale for selecting these groups can be found in the appendix.

### Recipient of services to improve digital inclusion

1. A person from a care home who received an iPad
2. A family who received a laptop for their 10 year old child
3. A young person attending the Church Street webinars
4. An older person who have been given a tablet and digital skills training\*

### Employment and skills

5. Someone who has become unemployed since COVID and lacks confidence using digital services to look for work (aged under 30)\*
6. Someone who has become unemployed since COVID and lacks confidence using digital services to look for work (aged 30-60)
7. Someone who has difficulty speaking English and is unemployed

### Families

8. A DE single parent family with a child under 5
9. A DE family with children under 12 that does not have broadband and or suitable internet devices for schoolwork (overcrowding)
10. A DE family with children between 12-19 that does not have broadband and or suitable internet devices for schoolwork (overcrowding)

### Homeless person

11. A rough sleeper with a smartphone but is unable to afford data
12. A family with digital skills in temporary accommodation with no access to WIFI in the home

### Disabled person

13. Disabled person who is digitally excluded and has a sensory impairment
14. Disabled person who is digitally excluded and has a mobility impairment
15. Someone with a learning disability who has limited digital skills (including their carer)
16. Someone who has a mental health issue and has difficulties using digital devices

### Vulnerable people aged 65+

17. Low income 75+ person (under £11,500 pa) who does not have internet access at home
18. Person 70-80 who lives alone and is isolated and has no access to the internet
19. A person 65-75 who has become more digitally active and confident since COVID
20. A person 75-85 with long term health issues requiring regular GP and hospital appointments

### Micro and SME business

21. A business in a 'not spot' area (less than 30 Mbps download speed)\*
22. A business who was in a 'not spot' area and now has full fibre connectivity
23. Someone who is starting a business for the first time and has attended a course provided by WCC to help to bring their idea to market.
24. A business in Church St with no online presence\*

## Step 3 - Recruitment of participants

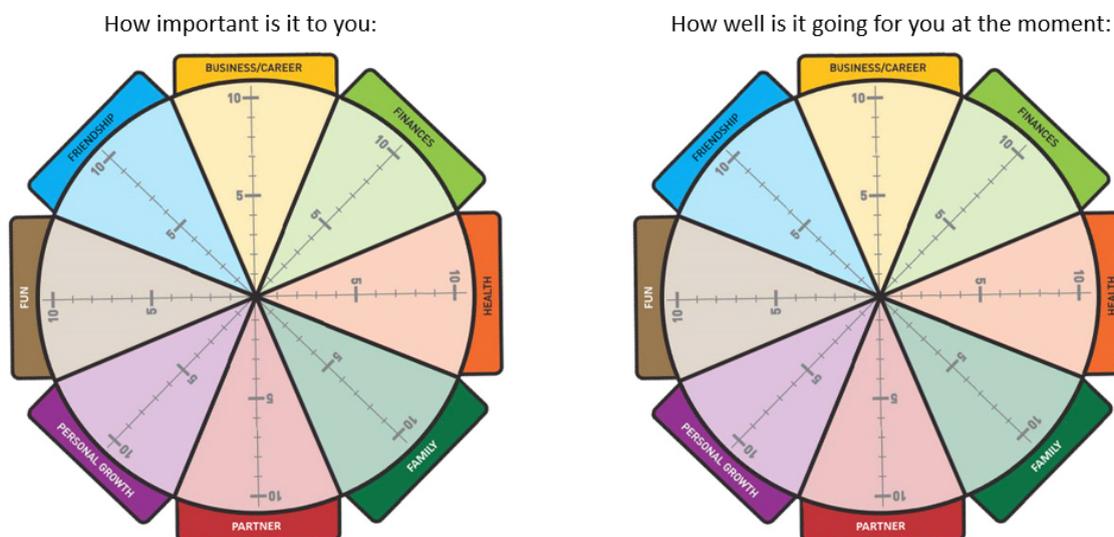
We recruited participants via council services and partner organisations from the voluntary and community sector. Professionals working directly with clients who fitted the persona specification asked clients if they would be interested in taking part in the research and if so, whether they would be happy to have their details shared with the digital inclusion team. Once we received contact details, we telephoned the participants to arrange an interview and explained the process and objectives of the research as well as briefing them on the pre-task detailed below.

## Step 4 - Pre-task and interviews

All participants were sent a pre-task to complete in advance of the interview to get people to think about how digital could fit into their lives. This included an introduction to the project followed by a wheel of life exercise where participants highlighted the importance of various aspects of life such as community, finances as well as how well they were doing on these issues at the moment. We also asked

participants to review any aspects of their life that they would improve from a list and circle those that applied to them.

The diagram below shows wheel of life.



Typically we carried out the Interviews via telephone due to COVID restrictions and the unsuitability of video calling for those who are digitally excluded, although two participants were able to conduct the interview either via Teams or WhatsApp. Ideally these interviews would have been conducted face-to-face. The interviews lasted between 45 minutes to 1 hour. We created a discussion guide to structure the interviews (this can be found in the appendix).

## Incentives

All participants received a £20 voucher of their choosing for taking part in the research to compensate them for the time taken to complete the interview.

## Timings

It took us one month to recruit participants, one month to conduct interviews and two weeks to produce the report. We then spent a further 3-4 weeks developing the persona case study templates.

## Step 5 - Analysis of findings

We used a range of techniques to analyse the findings. All of the interviews were recorded, and the main points and quotations placed in a grid with the questions at the top of the grid and the interviews down the side. This allowed for the interviews to be compared and contrasted and themes identified and developed.

## Step 6 - Findings

For each persona, we used a combination of descriptive text to introduce them, then we then set out their needs and goals alongside their frustrations.

On a side panel we introduced a summary of:

- the extent of digital inclusion
- The type of digital skills to be learned
- The stage of behaviour

For digital inclusivity we looked at four areas:

- Access - refers to any issues in acquiring the right digital device for their needs
- Connectivity - relates to the quality of their internet connection
- Digital skills - refers to people’s level of digital ability
- Attitude - refers to people’s level of desire to become more digitally included

For each area, we then colour coded them to show the extent of the difficulty faced where green meant no significant issues, amber indicated some difficulty and red showed considerable difficulty.

A sample person is shown below.

**User group:**  
Low-income family

**Persona:**  
Mum with 17year-old

**Bio**  
Lisa is 59, has five adult children and lives with her 17 year old daughter Charlotte\* who has PTSD from witnessing her father abuse Lisa. They had to move to London from Leeds to escape the abuse. Charlotte is studying art at a local college and was given a laptop by the Early Help team a week before the interview. As well as caring for her daughter Lisa also cares for her 92 year old dad who lives in Kent. Lisa is unemployed at the moment and does not feel that she can work due to her caring responsibilities. She is a yoga teacher and would like to practice again once her life becomes more settled. She has a smartphone with giffgaff and she shares data with her daughter who uses it on the laptop.

**Needs & Goals**  
- Basic digital skills training to be able to use the internet for basic activities such as completing an online form for the gym  
- Develop her yoga practice as she knows that she will need an online and social media presence in order to achieve this  
- Help to set up the business and interact digitally with customers

**Frustrations**  
- Her main barrier is her negative attitude to the internet and devices that use screens.  
- She does not like using screens.  
- Lacks the skills to undertake tasks which are more complex than sending emails or basic searching

**Digital Inclusion**  
Access: Green  
Connectivity: Yellow  
Digital skills: Red  
Attitude: Red

**Digital skills to be learned**  
Foundation:   
Life:   
Work:

**Behavioural Stage**  
1. Pre-contemplation  
2. Contemplation:   
3. Preparation  
4. Action  
5. Relapse  
6. Maintenance

**Quote:** "We have no choice but to make an effort with technology and use it. I understand it is the way of the world now, but it doesn't necessarily speed up or improve communication"

**Profile Summary:**  
Lisa  
Age: 59  
Status: Mum of a 17 year old child who recently received a laptop

Lisa has a smartphone and laptop so has no access issues. She does not have broadband but has mobile data so she is amber on connectivity. She has low levels of digital skills and is reluctant to become more digitally included which is why she is red for both of these attributes.

We used the government’s [Essential Digital Skills Framework](#) to identify the level of and type of skills that each persona needs to acquire to not be disadvantaged. In the persona example above, Lisa needs to acquire both life and work skills.

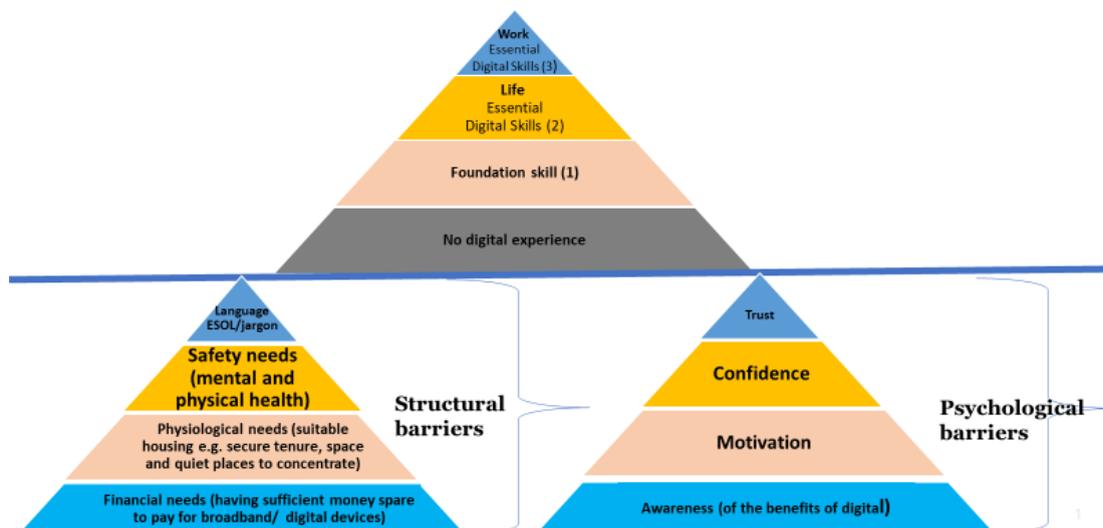
People tend to be at different stages in terms of changing their behaviour towards digital inclusion. It is important to know where people are on the behaviour change cycle so that appropriate interventions can be developed.

We have used the six stages of the states of change behaviour model in our persona:

- Pre-contemplation - is a state of not thinking about digital exclusion
- Contemplation - is thinking about digital exclusion but not doing anything about it
- Preparation - is starting to do something such as looking for a digital skills course
- Action - is doing something positive regarding digital inclusion such as getting broadband or a device
- Relapse - is becoming less digitally included, for example uninstalling broadband or forgetting how to use WhatsApp.
- Maintenance - is maintaining skills to be digitally included

The research findings were written up into a report which can be found in the appendix.

Before people can begin their digital journey first they need to overcome a range of physical and psychological barriers



## Validating the personas

We wanted to make sure that the user personas created by Westminster were consistent with the residents and service users that the departments and teams came across in the different boroughs.

Taking the 24 user personas created by Westminster, we divided them between Southwark, Barnet and Brent. Each borough set up workshops to gain a better understanding of their service users and whether anything could be added to improve the personas.

### Southwark

- Low Income Families
- People with disabilities
- Beneficiaries of existing digital support

The initial workshop was held with internal stakeholders from education, libraries, local economy, digital infrastructure, children's services and adult learning. Following this workshop, we recognised that there was a need to create some more personas to cover groups relevant to Southwark. These are:

- Adults with low numeracy and literacy groups
- Care Leavers
- People in traveller groups

During the workshop in Southwark we found that we needed an understanding which specific service areas and teams these residents may come into contact with and recognised that digitally excluded people can fall into several categories. By trying to target interventions in a more holistic way, we could develop a better understanding of what additional support could be offered.

### Barnet

- Homeless
- Unemployed

We engaged with our Barnet Homes team and Rough Sleepers Coordinator, and Skills and Employment teams to test and validate these personas. Broadly, these personas resonated strongly with our services and echoed what they have been seeing firsthand over the past year.

### Brent

- SMEs
- Vulnerable adults over 65
- Beneficiaries of existing digital support

We engaged with a variety of internal stakeholders including the Economic Development Officers, the Adult Social Care duty team and members of our Resident Support Fund application team to review and validate these personas. It

was agreed that the majority of personas reflected the experience of colleagues where they have been working with the identified user groups.

In addition to the above, we have also created two new persona groups:

- Adults with low numeracy and literacy skills
- Care leavers

We would like to add these personas in due course:

- Businesses with no existing digital skills
- Traveller Communities
- Adults with multiple disadvantages

Detailed feedback from these sessions alongside additional detail on the process and templates can be found in the appendix.

## Resident interviews

### Introduction

Brent, Barnet and Southwark commissioned an external researcher, EY Seren, to help understand how residents interact with the digital support services they have been providing. We wanted to know how to assess the impact of this digital support on the lives of residents, work out the value of the investment and identify areas for improvement.

### Why we did this

The aim was to hear the voices of three specific resident groups to explore how far the service and support met their needs:

- Those with learning disabilities
- Those with experience of home learning
- Residents experiencing unemployment and developing new skills

The outcome of this research was intended to inform policy and shape digital inclusion services in the long term to get the right services and support to residents at the right time.

### How we did this

We asked EY Seren to interview 16 residents across the three boroughs. The interviews were conducted one to one over telephone (given the nature of digital exclusion) for 60 minutes over a 10 day period.

The boroughs were responsible for recruiting the resident participants. This was done through recommendations from various services such as day centres and Mencap to ensure participants would be comfortable and suitable for interviewing (given the vulnerability and needs of the groups).

An initial kick off session was held to agree research objectives and proposed outputs with discussion guides (used to prompt the interviewers and moderators) developed by the research team and agreed with all three boroughs.

The research team contacted all participants in advance of the interviews to confirm and record consent alongside answering any questions they might have in advance (consent was reiterated at the beginning of the interviews).

The interviews were conducted in a flexible manner with participants directed to provide honest opinions throughout and additional topics explored where relevant. Particularly vulnerable residents (e.g. with severe learning disabilities or where English was a second language) were given additional support from their respective councils where required.

Participants were asked to talk through their:

- awareness and motivations of digital support
- experience of receiving digital support
- experience of using digital support/services

The responses were then anonymised, coded and analysed by the research team who presented the agreed outputs and research outcomes in a 56 page research report.

### What we learned

We gained many valuable insights into the three resident groups, which we have summarised here.

#### Learning disabilities

Digital support allowed participants to stay in touch with peers, significantly improving behaviour, mental wellbeing and confidence and comfortability with digital activities.

- *Service considerations: Digital support can be a respite provider alongside usual provision e.g. day centres.*

It can be challenging to learn how to use a new device, especially keyboards with lots of letters and symbols which can confuse and distract participants.

- *Service considerations: A tablet with a touchscreen may be more intuitive than a keyboard/mouse; consider comprehensive device onboarding support for caregivers where they can report technical issues, internet safety and other issues.*

All participants appreciated the digital support provided and would like to continue receiving support post-lockdown.

- *Service considerations: Consider continuation and further development of digital support post-lockdown including device ownership and closer working with day centres.*

#### Home Learning

Not having a suitable device for schooling (e.g. using a smartphone screen, old devices, one device for multiple children) was very challenging and stressful so digital support enabled confidence in learning and socially for both parents and children.

- *Service considerations: Consider using Chromebooks that are intuitive and enable easy access to Google Classroom.*

The learning resource gap was minimised between disadvantaged and advantaged children as they could access courses outside of school (coding, singing, language) alongside meeting additional needs such as therapy.

- *Service considerations: Highlight available learning resources provided by the council and other recognised sources.*

Internet addiction, social media and online safety are concerns for parents

- *Service considerations: Provide internet safety training to inform parents and children.*

### **Unemployed/ low skills**

A well functioning device creates a confident learning environment (large enough screen, pre-installed apps) addressing both immediate functional and softer needs such as feeling capable in modern society.

- *Service considerations: Consider using emotional benefit-led language during promotion and softer measures of service success including confidence/emotional benefits.*

Chromebooks have easy-to-learn operating systems but Windows is most likely to be used at work and some participants didn't feel fully comfortable using their loaned devices when doing certain activities such as online banking.

- *Service considerations: Consider the balance between usability and future workplace applicability alongside the pros and cons of loaned vs given to own.*

Most participants discovered digital support via a support worker or teacher and did not always recognise the term 'digital support'.

- *Service considerations: Focus promotion of digital support via community networks and word of mouth using descriptions of digital activities and benefits rather than talking about 'digital support'.*

There wasn't a full understanding of what digital skills training could lead to e.g. the progression after an Excel course.

- *Service considerations: Keep track of users in the context of career planning/ personal goals e.g. could beneficiaries be upskilled to be digital trainers themselves?*

### **Key insights**

As a result of this research, we found some useful insights emerged:

- Improved wellbeing from more social interactions, higher confidence that extended to other aspects of their lives (e.g. being able to use self checkouts as a result) and feeling more like "a part of modern society"
- Respite for caregivers and parents due to digital support enabling more stable home environments
- Extended learning and personal development beyond school lessons, closing the learning gap created by the pandemic
- Delivered a device fit for purpose, which helped students to complete their work on big enough screens, minimised technical difficulties and stress

## Face-to-face surveys

### Introduction

Westminster and Kensington and Chelsea came together to develop a face-to-face survey to target some of the key excluded groups identified from local and national research, to better understand the challenges, barriers and potential motivators to becoming digitally included.

Other boroughs can use this process to get insights that will enable them to better understand their resident needs, effectively target interventions, ensure efficient use of our resources and ultimately help to improve the lives of vulnerable people locally.

### Why we did this

The face-to-face survey aimed to capture the 'softer' aspects of digital exclusion not captured by our mapping. We were particularly interested in finding out what structural barriers existed to reinforce digital exclusion and if there were any individual or group behaviour that inhibited people from using digital technologies in their lives.

We wanted to find out more about:

- Residents over 60
- Disabled residents or residents caring for someone with a disability
- Unemployed residents
- Low-income households

We designed the survey to provide insights and help us understand our residents, target more effective interventions, ensure efficient use of our resources and ultimately help us to improve the lives of vulnerable local people.

### How we did this

Following discussion with LOTI, local authority partners and other external stakeholders (including Good Things Foundation and University experts), we developed a 15 minute face to face survey with digitally excluded residents.

The survey included screening questions used at the start to identify digitally excluded residents in the four groups. To qualify for an interview, the resident had to be one or more of the following: aged 60+, unemployed, have a disability or look after someone with a disability; or have an annual household income less than £20,000.

Based on our earlier quantitative findings, we estimated that there were ~17,500 digitally excluded residents in WCC and ~12,000 in Kensington and Chelsea. To

achieve a representative sample, interviewers targeted a minimum of 800 respondents (400 in each borough).

A random location sampling approach was used with demographic quotas set for each of the four key vulnerable groups. Using our mapping work, we also provided interviewers with an indication of the output areas where digitally excluded residents were more likely to be located.

Lake Market Research, an external research company, carried out the interviews with residents from Westminster and Kensington and Chelsea over a ~6 week period. They spread out the interviews across weekdays and weekends. They were supplied with suitable protective and safety equipment and a signed letter from both councils to reassure residents about who had commissioned the survey.

All interviewers used electronic tablets, were pre-screened for eligibility and wore visors, gloves and carried hand sanitisers. Where required, Lake Market Research also provided additional language support to those residents who needed it.

Following completion of the survey, Lake Market Research provided raw data alongside weighted summary statistics which our research and insights teams analysed.

## Segmentation

From the survey results, we used data-driven segmentation to group survey respondents into naturally existing segments, based on their shared barriers to accessing the internet. These segments can be used to identify different forms of digital exclusion and can provide a valuable evidence base for decision making and targeting initiatives. Based on the insights we then designed tailored interventions for each segment.

Using the barriers listed in the survey as segmentation criteria, we used unsupervised machine learning (k-means clustering algorithm) to group respondents based on the similarity and closeness of their responses. Segments were derived in R using the “flexclust” package.

Segments were characterised according to the barriers that their members were more likely to encounter, compared to the overall survey average.

Segments were further described and typified by crossing them with other demographic and socio-economic variables (e.g. age band, household income, employment status), to determine whether particular types of people were significantly over- or under-represented within each segment, relative to the survey average (chi-squared test).

## Survey insights

Insights from the face to face survey are below. More details on the insights can be found in the appendix.

**More than a third of respondents said they did not access the internet in the last year.** Of these, only 2% had already taken steps to help them get online.

Almost two thirds said they have no interest in using it and nothing would persuade them to use it. This was most prevalent in those aged over 60. From a behaviour change perspective, this suggests many respondents are still at the precontemplation stage.

**Other than lack of interest, confidence and skills were generally the most significant barriers to digital inclusion.** More than a third of internet users said they were not very or at all confident in using the internet. Half of those who didn't lack confidence still admitted they have some gaps in the skills they need for their personal or work life.

**Free devices and connectivity will work for a small minority but other initiatives are required to encourage digital inclusion.** Approximately 1 in 10 non-internet users said a free device would most likely encourage them to use the internet in the future. Over a quarter of non-internet users said they had some interest in using the internet, but the cost, effort and/or equipment needs outweighed the advantages, particularly among unemployed people.

**Across all four groups, social activities were the most important perceived benefit of accessing the internet.** Less than 1 in 10 (9%) non-internet users said accessing information was most important and very few (3%) wanted to use it to contact organisations such as the council. Among internet users, 1 in 10 said they used the internet for council tax or other local council services in the last 3 months.

**Over 60s were most likely to lack digital skills, but almost half didn't think they needed them.** There is a need to raise awareness of the benefits of accessing the internet to this group.

**Two in five respondents said they'd prefer to receive help from friends and family to improve their confidence and skills.** This emphasises the importance of supporting friends and family to help their loved ones learn digital skills. The majority of respondents had no children living with them so the onus should be on peer support

**Unemployed people and those on low incomes are most likely to benefit from having access to the internet.** Unemployed people were more likely to need outside help as a greater proportion lived in a household where no one else had digital skills. By comparison, low-income families were more likely to have a confident user in the household and this could be leveraged.

**One in five respondents used the library for accessing the internet, which supports having digital skills training in libraries.** In particular, unemployed respondents were more likely than average to access the internet in a library, community centre or public place.

**Only 13% of unemployed people used the internet to apply or search for jobs.** Unemployed people lack awareness of how digital can help them in getting a job and we should raise awareness of the opportunities open to them.

## The response of each segment

Using the segments revealed by our earlier survey analysis, we have summarised the key barriers, the defining characteristics and the interventions we need to reduce digital exclusion.

### Segment 1 - Not for me

The key barrier is lack of interest.

#### Defining characteristics

- Largest segment of non-internet users. All members of this segment said they had no interest in using the internet.
- Consisted predominantly of older residents; 86% were over 65 years old, and almost half (46%) were over 75 years old.
- The majority (94%) said they weren't planning to access the internet in the next 12 months, and more than 4 in 5 (84%) felt they didn't need to learn any skills in the future.
- Over half (59%) said they saw no benefits to accessing the internet.

#### Interventions

This segment would benefit from being shown the tangible benefits of accessing the internet. It is likely they would need numerous interventions to reduce the barriers to embracing the internet and using digital devices, some of which may need to come from trusted friends or family. They may also benefit from non-digital solutions and incentives.

### Segment 2 - Reliant on others

The key barriers are impairments, getting someone else to do what they need and over complexity.

#### Defining characteristics

- More than a third of members in this segment said that impairments make it difficult for them to use the internet, and that they get someone else to use the internet on their behalf.
- Members of this segment were less likely to face barriers associated with cost or lack of equipment (<5%).
- Almost 1 in 5 (18%) had children living in their household.
- Almost half (49%) said they would just like to develop basic skills, such as sending and receiving emails, but not more advanced skills (e.g. internet banking or staying safe online).

#### Interventions

Raising awareness of the wide range of digital skills opportunities as well as free and subsidised connectivity and device initiatives would be a real benefit to this segment. This may work well through family and friends as well as via council touchpoints, where this segment may interact with the local authority.

## Segment 3 - Unconfident

The key barriers are a lack of confidence, uncertainty and lack of trust.

### Defining characteristics

- All members of this segment said they were not confident using devices or the internet.
- Over a quarter (26%) didn't know where to start with it and almost 2 in 5 (19%) were worried about making mistakes or being taken advantage of.
- Almost a third (31%) said that getting more support from someone to help them get online would encourage them to use the internet in the future.
- Lack of confidence transcended demography - few demographics were over or under-represented in this segment.
- Approximately 2 in 5 (19%) said they were non-registered unemployed seeking work.

### Interventions

Like segment 2, the unconfident would benefit from knowing about the range of digital skills courses available through friends and family as well as via their local council.

## Segment 4 - Low income and confidence

The key barriers are a lack of equipment, a lack of confidence, over-complexity and the high cost of devices.

### Defining characteristics

- Members of this segment were more likely to face multiple barriers to digital inclusion; all said they lacked the right equipment, three quarters lacked confidence, and more than half cited the high cost of devices as a barrier.
- Approximately 4 in 5 (81%) had a yearly household income of 10k or less.
- The majority (86%) were in NRS social grade E (non-working)<sup>3</sup> and approximately 2 in 5 (19%) said they were non-registered unemployed seeking work.
- Almost a quarter (24%) would like help from a council service, such as Adult Education or other learning provider.

### Interventions

This segment may need more specialist support due to impairments and will rely on advice from carers and support services to understand the range of digital skills training opportunities available.

## Segment 5 - Financially constrained

The key barriers are the high costs of wi-fi data and the high cost of devices.

### Defining characteristics

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<sup>3</sup> <http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/>

- This was the smallest segment of non-internet users. High costs were the main barrier for members of this segment, rather than other factors such as lack of confidence or interest.
- Almost 1 in 10 (9%) also said English as a second language was a barrier to accessing the internet.
- Almost half (48%) said that free or low cost internet access would encourage them to use the internet in the future.
- Over half (52%) said they would just like to develop basic skills, such as sending and receiving emails, but not more advanced skills (e.g. internet banking or staying safe online).

#### Interventions

There may be specialist support groups who can help here, they will be useful to share information about digital training opportunities and raise awareness of the free or subsidised connectivity and device initiatives.

## Lessons learned

There are many lessons we have learned throughout the project, we have selected the following in the hope that they will support future digital inclusion projects.

- Collaboration is most difficult at the outset.
- There are many local authorities, central government bodies, and other organisations that have researched digital exclusion. These can add insights but often the reporting style and findings are of limited use in providing background and context. You still need to bring together a local landscape of digital exclusion and needs based on localised data, inputting knowledge and experience of key service users.
- Engaging council services, partners and community networks early on in the process will help you identify needs, leverage resources and develop a collaborative, sustainable and effective approach in tackling digital exclusion.
- There are very few agreed and standardised definitions and metrics for digital exclusion which can make sharing and coordinating more difficult.
- Start recruitment early for resident participants, particularly given the vulnerable nature of the groups, as we had many last minute cancellations.
- Ensure any outputs created include both digestible formats (one pagers, summary presentations, toolkits) for easy redistribution purposes alongside full detailed reports.

## Next steps

### **Westminster**

Inform how we can tailor our interventions further to meet the needs of the key groups and its subsets. Insights from this project will also provide a good foundation as we set up a partnership approach in tackling digital exclusion. It is our aspiration that all our interventions are data/evidence-led in terms of resourcing, targeting and meeting the needs of our residents.

### **Brent**

Inform future business cases, including the launch of a business support fund for devices and digital skills and the expansion of providing devices for pupils in Brent. Both of these support funds will exist alongside the existing digital fund within our resident support fund. The research will also be used to inform the future procurement of devices to meet the various needs of digitally excluded residents.

### **Kensington and Chelsea**

Share this sophisticated understanding of need across our cross-sector digital inclusion partnership to shape the definition of all the projects overseen by the partnership and to inform the council's investment case.

### **Southwark**

Sharing within digital inclusion and central digital skills working groups, external partners (job centres, community groups), informing the targeting and creation of videos for Southwark residents on actions such as how to create a MySouthwark account. In addition, supporting our understanding of how many people are in the different user persona groups and how we can effectively include them.

### **Barnet**

Presenting to our cross-cutting digital inclusion forum and establishing a task and finish group using the insights from this project to deliver more targeted digital inclusion support in the borough.

### **Cross borough with LOTI**

As part of LOTI's [Digital Inclusion Innovation Programme](#) (DIIP) LOTI will continue to develop the map with the five project boroughs and welcome any other boroughs and stakeholders who want to join the project. Our focus will be on iterating the map based on the needs of key users. We will begin by understanding the user needs of the other DIIP projects which include device upcycling; digital inclusion in temporary accommodation; and supporting dementia carers.

## Appendix

### **Pan-London map of digital exclusion**

- [Digital Exclusion Map](#)
- [Inclusion Toolkit - Draft content\\_GIS Data Mapping for DigitalExclusion - Google Docs](#)
- [Digital Exclusion - Exploration of Potential Datasets - Google Sheets](#)

### **The persona bank**

- [Pan-London Digital Inclusion Personas](#)
- [Discussion Guide From Component 2: Persona Validation and New Persona Identification - Google Docs](#)
- [User Persona Validation - Workshop Feedback from Southwark, Brent and Barnet - Google Docs](#)
- Borough workshops to validate the personas with service users - [Draft email to send to service departments](#)
- [Inclusion Toolkit - Draft content\\_Persona Interview Journey - Google Docs](#)

### **Resident interviews**

- [Full research report and quotes](#)
- [Summary research report presentation](#)
- [One pager summary](#)
- [Example template consent form and script](#)
- [Example discussion guides](#)
- [LOTI Covid Innovation Fund \(Mapping Digital Exclusion in London\) Phase 1 research - show & tell - YouTube](#)

### **Disclosure**

In carrying out the work and preparing the report, EY Seren have worked solely on the instructions of Brent/ Barnet/ Southwark Councils and for Brent/ Barnet/ Southwark Councils' purposes. The report may not have considered issues relevant to any third parties. Any use such third parties may choose to make of the report is entirely at their own risk and EY Seren shall have no responsibility whatsoever in relation to any such use.

### **Face-to-face surveys**

- [Digital inclusion F2F questionnaire](#)
- [Lake approach to digital inclusion survey](#)

### **Other resources and toolkits**

- [Croydon and Leeds DI Toolkit](#)
- [Greater Manchester - Digital Exclusion Risk Index](#)

## Contributors

We have benefited enormously from working in partnership with five London boroughs. We are grateful to everyone who contributed to developing the toolkit.

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## Checklist

### Where is digital exclusion?

- Think about why you are interested in mapping digital exclusion - what are the outcomes you hope to achieve?
- What is the problem you are trying to solve?
- Review the pan-London map for digital exclusion
- Consider the data sources in the map and whether you already use them
- Contact GLA to get access to password protected geopackages and geodatabases map
- Discuss the map with GIS experts in your organisation
- Review the list of other data sources to see if they work for you
- Note the data ethics considerations in the toolkit to see if you plan to combine additional datasets
- Use your GIS experts to populate the map with additional locally held data and get a nuanced view for your borough
- Use your findings as strategic insights or in designing specific interventions

### Who is digitally excluded?

- Review the persona bank of residents who are at different points of digital exclusion and see if these resonate with you in your area
- Consider validating them using the process set out in the toolkit

- Look at step 6 - findings to see how Westminster used the personas to think about ways to reduce digital exclusion with groups of residents
- Read the survey insights from Westminster and Kensington and Chelsea to see what they found out about barriers to internet usage
- Review the segments to see if they are a good way for you to think about digital exclusion in your area
- Think about the lessons learned by those who developed the toolkit and see how they can help you in your area

### **What to do next**

- Contact LOTI to join the work on developing the map as part of the Digital Inclusion Innovation Programme