Kent Analytics Report

Digital Exclusion in Tonbridge & Malling

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Kent Analytics, Kent County Council
www.kent.gov.uk/research

Kent County Council kent.gov.uk

1 Report Contents

This report provides a broad overview of the evidence base for digital inclusion and analyses on digital exclusion in Tonbridge and Malling.

2 Executive Summary

Digital inclusion is about ensuring everyone has access and the skills to use the Internet and digital technologies. Digitally excluded people can lack skills, confidence, and motivation, along with having limited or no access to equipment and connectivity.

Two socio-demographic groupings of those most likely to be digitally excluded have been previously identified ('mature and older people' and 'working age on low incomes').

- In Tonbridge and Malling, 18.1% of households are classified as 'mature and older people' (21.9% for KCC) and 11.2% of households are classified as 'working age on low incomes' (15.9% for KCC)

Additionally, in Tonbridge and Malling:

- 29% of LSOAs are classified as one of the four digitally excluded profiles according to the Internet User Classification. This is a significantly lower proportion of LSOAs than Kent overall (46%).
- 2.8% of LSOAs in Tonbridge and Malling are in the 10% most likely to be digitally excluded neighbourhoods in Kent.
- The average LSOA digital inclusion score is significantly lower than for Kent (38.83 vs 49.32) with fewer LSOAs in the most likely to be digitally excluded.
- 45.6% of LSOAs are categorised in the most likely to digitally access the Census (higher than the UK).
- The average proportion of households who use the Internet less than every day for LSOAs is 12.6%, which is significantly lower than for Kent.
    - Interestingly, 41.8% of households in one LSOA in Tonbridge and Malling are likely to not use the Internet every day as compared to 0.0% of households in another LSOA in the same district, highlighting the marked disparity in Internet use within the district.
- The average broadband speed per LSOA is 72.22Mbps, which is significantly higher than Kent (66Mbps).
    - There is a clear divide between rural and urban LSOAs with urban LSOAs receiving an average broadband speed of 81.47Mbps and rural LSOAs receiving an average broadband speed of 53.73Mbps.
- The average proportion of households per LSOA with poor broadband is 0.4%, which is significantly lower than Kent (0.5%).

There are less digitally excluded populations in Tonbridge and Malling as compared to Kent. However, broadband speeds could be a potential issue in rural areas. There are also disparities in digital inclusion across different areas in Tonbridge and Malling.

3 Digital Exclusion in Tonbridge and Malling

Digital inclusion is about ensuring everyone has access and the skills to use the Internet and digital technologies. Digitally excluded people can lack skills, confidence, and motivation, along with having limited or no access to equipment and connectivity.

Previous research by Kent Analytics has shown that the key determinants of digital inclusion are increasing age, social inequalities, and rurality. The most deprived communities in Kent are much more unlikely to keep up with developments in technology, as well as older people and those in rural locations. Older people and those in rural locations in Kent are less likely to have access to technology. Furthermore, affluent households are more likely to use the Internet several times a day, whereas the more deprived households tend to use the Internet roughly every day or sometimes less than that. Additionally, older people and more deprived households in Kent are more likely to use the Internet less than every day.

Previous research by Kent Analytics has also highlighted significant disparities in digital inclusion across and within districts in Kent. This report therefore focusses on digital exclusion in Tonbridge and Malling.

3.1 Socio-demographic profiles

One way to look at digital inclusion is to identify particular socio-demographic profiles who are more at risk of digital exclusion using the Mosaic segmentation profiles[2]. The Mosaic segmentation tool is a system for geodemographic classification of households[2] (see Experian's Mosaic in the Methods section for further information). This system runs alphabetically from the most affluent (Group A) to the most deprived socio-economic groups (Group O).

It is clear from previous work by Kent Analytics that there are three main groups within the population that are more at risk of digital inclusion: older people, those on low incomes, and those in rural areas. The main issue with rural areas is the lack of decent broadband, which is analysed in 3.3.5.

Instead, we focus on two groupings of socio-demographic profiles:

1) Mature and older people; and
2) Working age on low incomes

Profiling in this way will identify clear target groups for any digital inclusion strategies. We can specify the numbers of households in each grouping and where these households are located to potentially map against current provision to identify any gaps. In addition, these groupings will have their own needs when it comes to digital inclusion.

3.1.1 Mature and older people

This grouping was identified using the following variables: age (56+), Internet usage (less than every day) and attitude to new technology (do not like new technology).

This resulted in the 'mature and older people' grouping being comprised of the following Mosaic groups:

- Senior Security (Group F)
    - Elderly people with assets who are enjoying a comfortable retirement.
    - Key features: Elderly, comfortable homes, don't like new technology, low levels of Internet use, more likely to have a PC than other devices.
- Outlying Seniors (Type G27)
    - Pensioners living in inexpensive housing in out of the way locations.
    - Key features: aged 60+, low-cost housing, rural, low income, not likely to have devices, low levels of Internet use.
- Modest Traditions (Group K)
    - Mature homeowners of value homes enjoying stable lifestyles.
    - Key features: Mature age, affordable housing, modest income, don't like new technology.
- Vintage Value (Group N)
    - Elderly people reliant on support to meet financial or practical needs.
    - Key features: Elderly, living along, low income, low technology use, need support.
- This grouping prefers to be contacted by post or landline.

The four groups/types in this grouping cover mature (Group K) and older populations (Group F, G27, Group N) with a range of deprivation from low (Group F), to medium (Group K), to high (Group N), and includes older people living in a rural locality (Type G27).

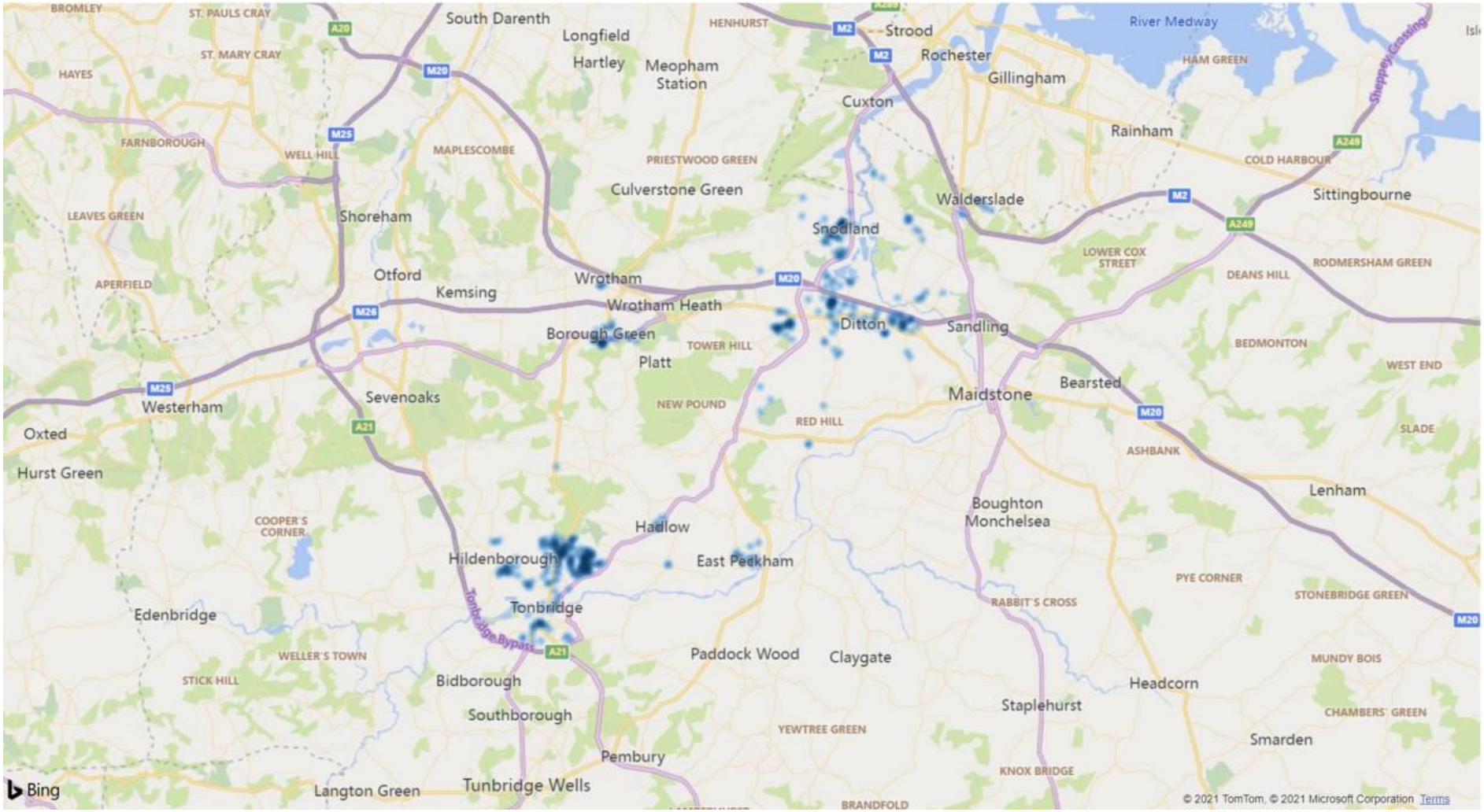
3.1.1.1 Mature and older people in Tonbridge and Malling

This grouping comprises 9,965 households (18.1%; CI 17.8-18.5%[1]) in the Tonbridge and Malling area. This proportion is significantly lower than for the KCC area (21.9%; CI 21.8-22.0%). Figure 1 maps the distribution of these households across the Tonbridge and Malling area with darker areas showing the highest concentration of households in this grouping. This grouping has high densities around Tonbridge.

[1] A confidence interval (CI) gives an indication of the degree of uncertainty of an estimate, showing the precision of the estimate. The 95% confidence intervals are calculated so that 95% of the time, the true unknown value would lie between the lower and upper confidence limits. A wider interval indicates more uncertainty in the estimate. If the confidence intervals overlap, the difference between the estimates is interpreted as not statistically significant. If the confidence intervals do not overlap, the difference between the estimates is interpreted as statistically significant.

Figure 1. Map of the clusters of households who are in the 'mature and older people' grouping. The darker areas show the highest concentration of households.

Mature and older people grouping



Source: Experian Mosaic 2019 Groups and Types[2]

3.1.2 Working age on low incomes

This grouping was identified using the following variables: age (18-35), high Index of Multiple Deprivation, low household income, employment status (more likely to be unemployed) and educational qualifications (more likely to have no qualifications).

This resulted in the 'working age on low incomes' grouping being comprised of the following Mosaic groups:

- Transient Renters (Group L)
  - Single people privately renting low-cost homes for the short term.
  - Key features: low income, access to the Internet.
- Family Basics (Group M)
  - Families with limited resources who have to budget to make ends meet.
  - Key features: families with children, aged 25 to 40, limited resources, have access to the Internet and devices but are less likely to keep up with new technology.
- Municipal Tenants (Group O)
  - Urban renters of social housing facing an array of challenges.
  - Key features: Social renters, low-cost housing, low income, few employment options, access only to a smartphone, low levels of Internet use.
- This grouping prefers to be contacted by mobile or email.

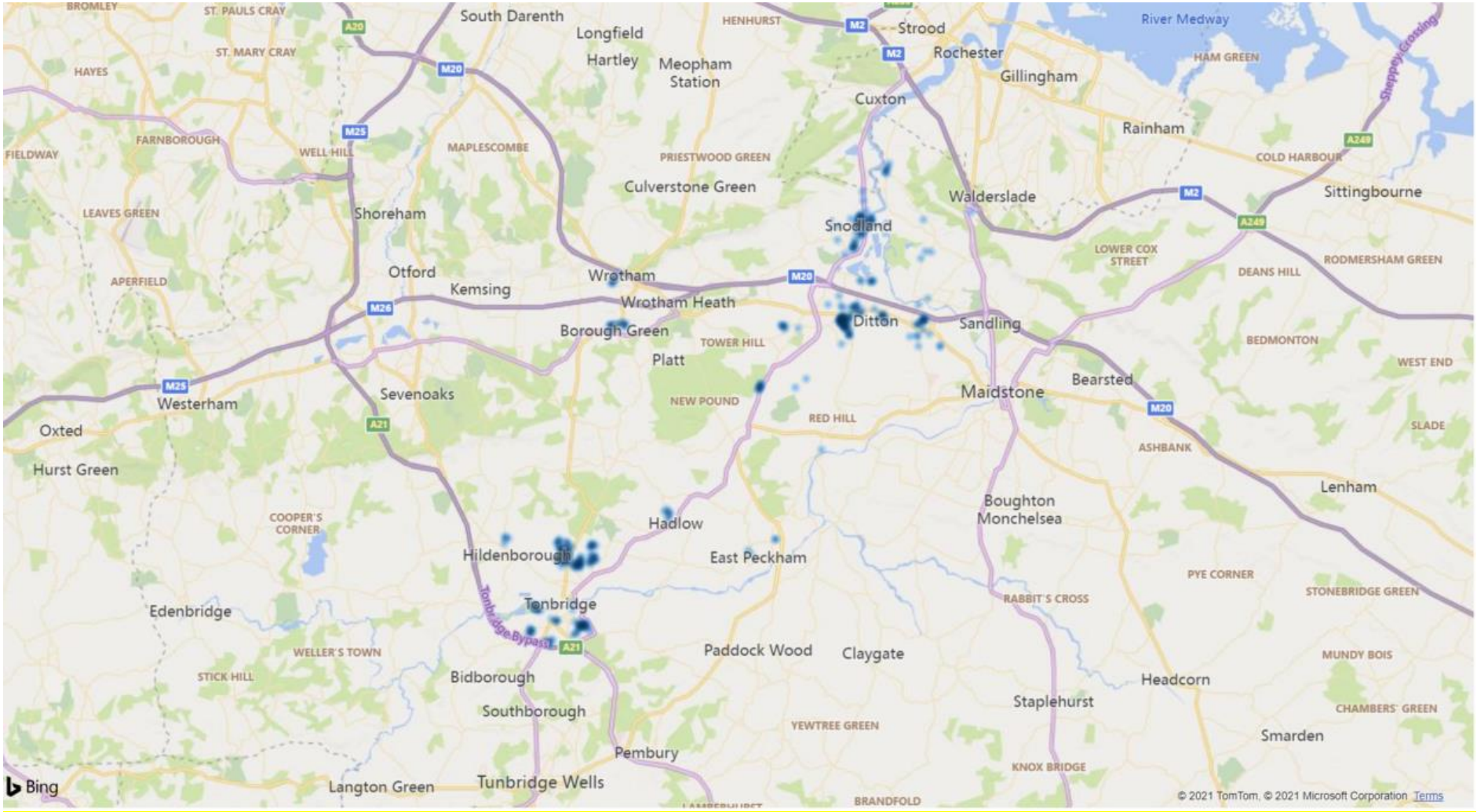
The three groups in this grouping cover single people (Group L) and families (Group M) both privately renting (Group L) and in social housing (Group O) with all groups having low incomes and living in more deprived areas.

3.1.2.1 Working age on low incomes in Tonbridge and Malling

This grouping comprises 6,136 households (11.2%; CI 10.9-11.4%) in the Tonbridge and Malling area. This proportion is significantly lower than for the KCC area (15.9%; CI 15.8-15.9%). Figure 2 maps the distribution of these households across the Tonbridge and Malling area with darker areas showing the highest concentration of households in this grouping. This grouping has higher densities around Tonbridge and Snodland.

Figure 2. Map of the clusters of households who are in the 'working age on low incomes' grouping. The darker areas show the highest concentration of households.

Working age on low incomes grouping



Source: Experian Mosaic 2019 Groups and Types[2]

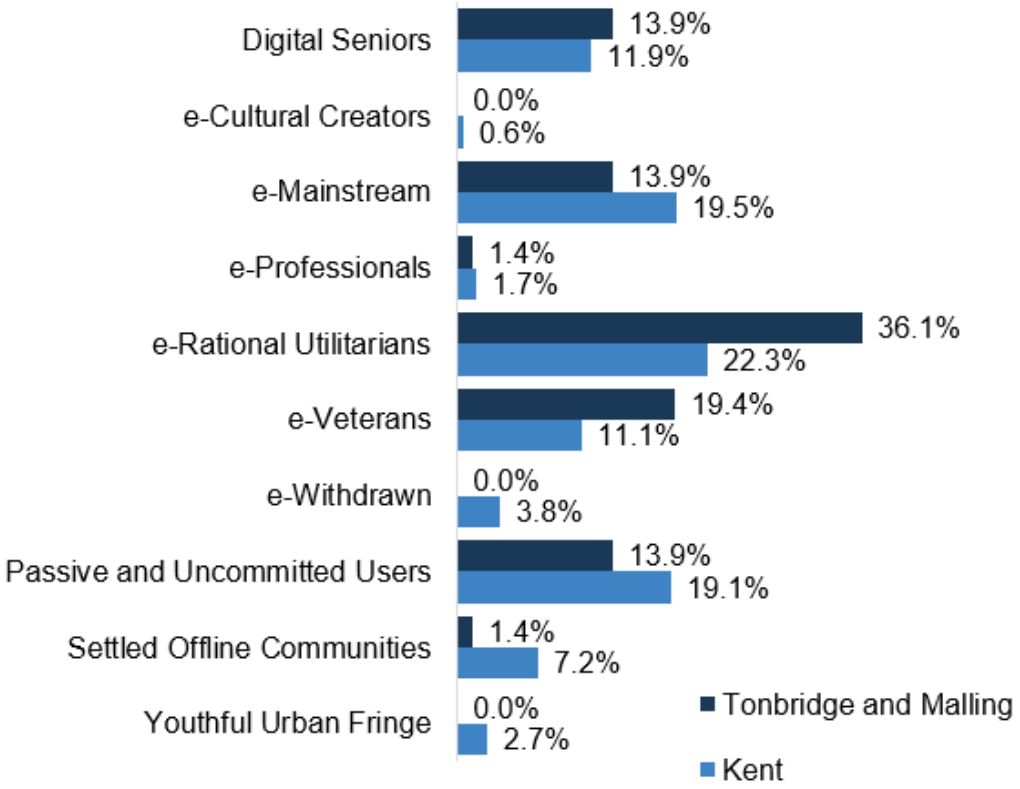
3.2 Internet user and engagement profiles

The 2018 Internet User Classification (IUC) is a bespoke classification that describes how people living in different parts of Great Britain interact with the Internet[1]. The 2018 IUC provides coverage for Kent at the LSOA level and provides 10 unique profiles of internet use and engagement (please see 2018 Internet User Classification for descriptions of each group).

3.2.1 Engagement with the Internet

Figure 3 shows the proportions of LSOAs for each IUC profile for Tonbridge and Malling as compared to Kent. Tonbridge and Malling has fewer LSOAs classified as 'Passive and Uncommitted Users' and 'Settled Offline Communities' than Kent. Tonbridge and Malling has proportionally more LSOAs classified as 'e-Rational Utilitarians' and 'e-Veterans.

Figure 3. There is a lower proportion of LSOAs classified as 'Passive and Uncommitted Users' and 'Settled Offline Communities' in Tonbridge and Malling than Kent



Source: IUC 2018[1]

3.2.2 Digitally excluded profiles

The four key digitally excluded IUC profiles are:

- Digital Seniors
- e-Withdrawn
- Passive and Uncommitted Users
- Settled Offline Communities

In Tonbridge and Malling, 29% (CI 20-41%) of LSOAs are classified as one of the four digitally excluded profiles. This is a significantly lower proportion of LSOAs than Kent overall (46%; CI 43-47%).

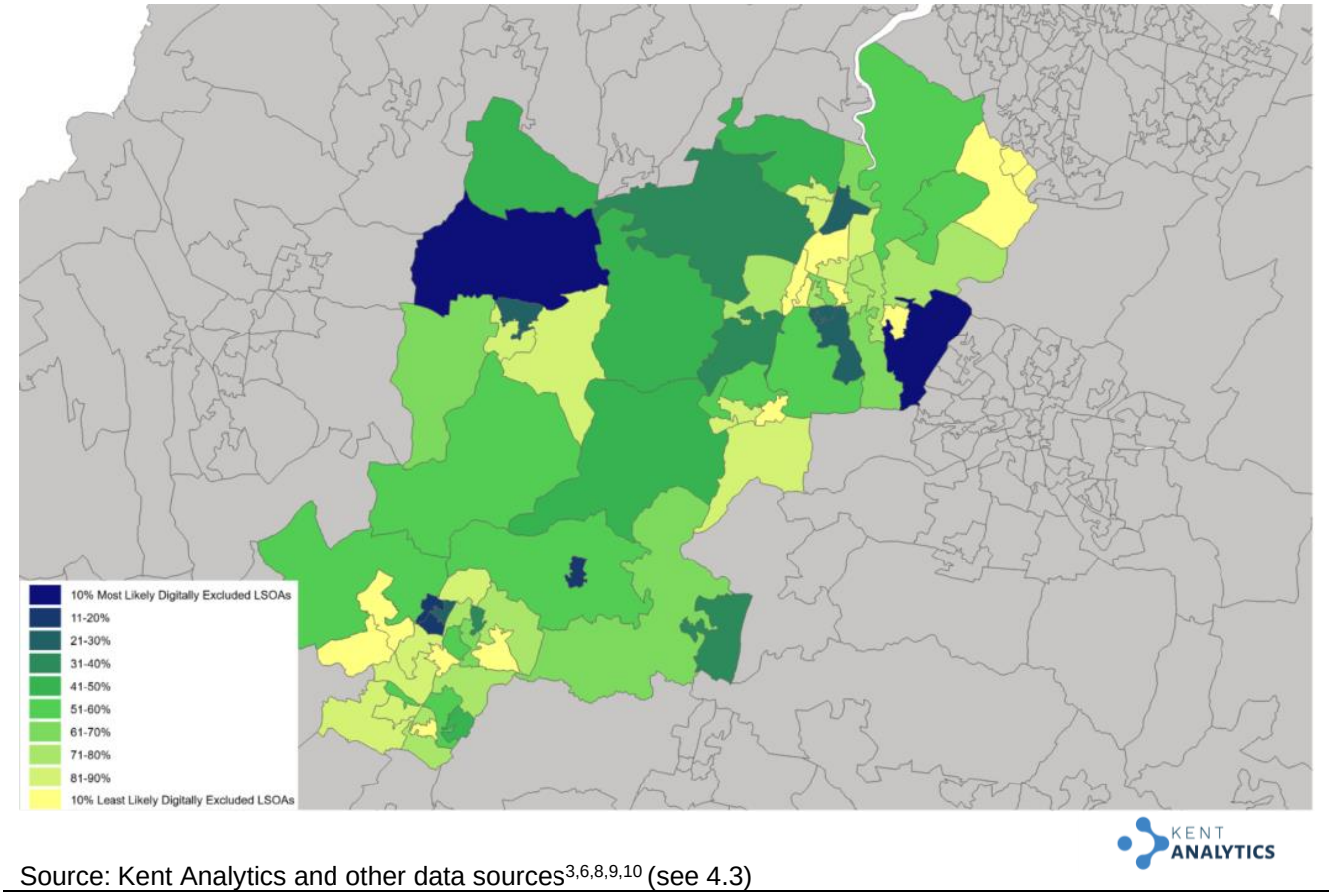
3.3 Mapping digital exclusion

A variety of data sets can be used to help understand and visually map differences in the distribution of digital exclusion between and within different areas. Kent Analytics have created a Power BI report that allows the user to further explore data related to digital inclusion in Kent.

3.3.1 Digitally excluded groups

We know from research on digital inclusion that particular demographic groups are more likely to be digitally excluded. A 'Digital Exclusion Score' has been calculated based on data relating to each of these excluded populations (see 4.3 in the Methods section for further information). These scores have been further divided into deciles and mapped in Figure 4. Decile 1 represents the 10% least likely to be digitally excluded neighbourhoods in Kent and Decile 10 represents the 10% most likely to be digitally excluded neighbourhoods in Kent.

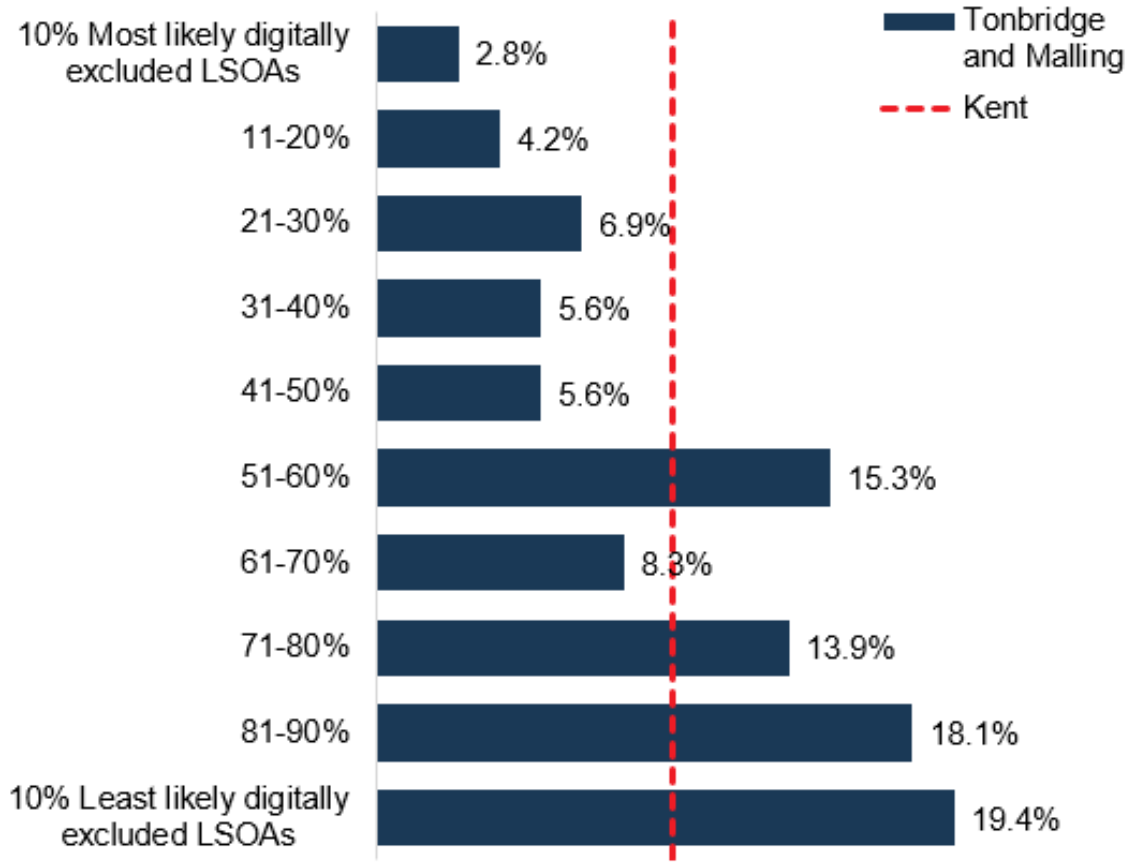
Figure 4. Map of the pattern of likely digital exclusion at LSOA level. The darker areas are those most likely to be digitally excluded and the lighter areas are those least likely to be digitally excluded.



Source: Kent Analytics and other data sources[3,6,8,9,10] (see 4.3)

2.8% of LSOAs in Tonbridge and Malling are in the 10% most likely to be digitally excluded neighbourhoods in Kent (Figure 5). The average digital inclusion score of LSOAs in Tonbridge and Malling is 38.83 (CI: 36.80-40.86) which is significantly lower than for all LSOAs in Kent (49.32, CI: 48.75-49.88) indicating lower levels of digital exclusion in this district. However, there are particular neighbourhoods of concern (Figure 6).

Figure 5. The proportion of LSOAs in Tonbridge and Malling in each digital exclusion decile.



Source: Kent Analytics and other data sources[3,6,8,9,10] (see 4.3)

Figure 6 shows the ten LSOAs with the highest digital exclusion scores in Tonbridge and Malling, along with whether the LSOA is classified as rural or urban and the LSOA's IUC group (see 2018 Internet User Classification for descriptions of each group).

Figure 6. Top 10 LSOAs most likely to be digitally excluded in Tonbridge and Malling.

LSOA	Type	IUC Group	Digital Exclusion Score	Digital Exclusion Decile
Tonbridge and Malling 005A	Urban	Passive & Uncommitted	83.87	10.00
Tonbridge and Malling 006F	Rural	Digital Seniors	75.66	10.00
Tonbridge and Malling 009C	Urban	Passive & Uncommitted	73.22	9.00
Tonbridge and Malling 009D	Urban	Passive & Uncommitted	67.64	9.00
Tonbridge and Malling 008D	Rural	Passive & Uncommitted	66.98	9.00
Tonbridge and Malling 003A	Urban	Passive & Uncommitted	66.64	8.00
Tonbridge and Malling 006D	Rural	Digital Seniors	64.92	8.00
Tonbridge and Malling 014B	Urban	Passive & Uncommitted	64.81	8.00
Tonbridge and Malling 009E	Urban	Passive & Uncommitted	64.08	8.00
Tonbridge and Malling 002G	Urban	Passive & Uncommitted	62.60	8.00

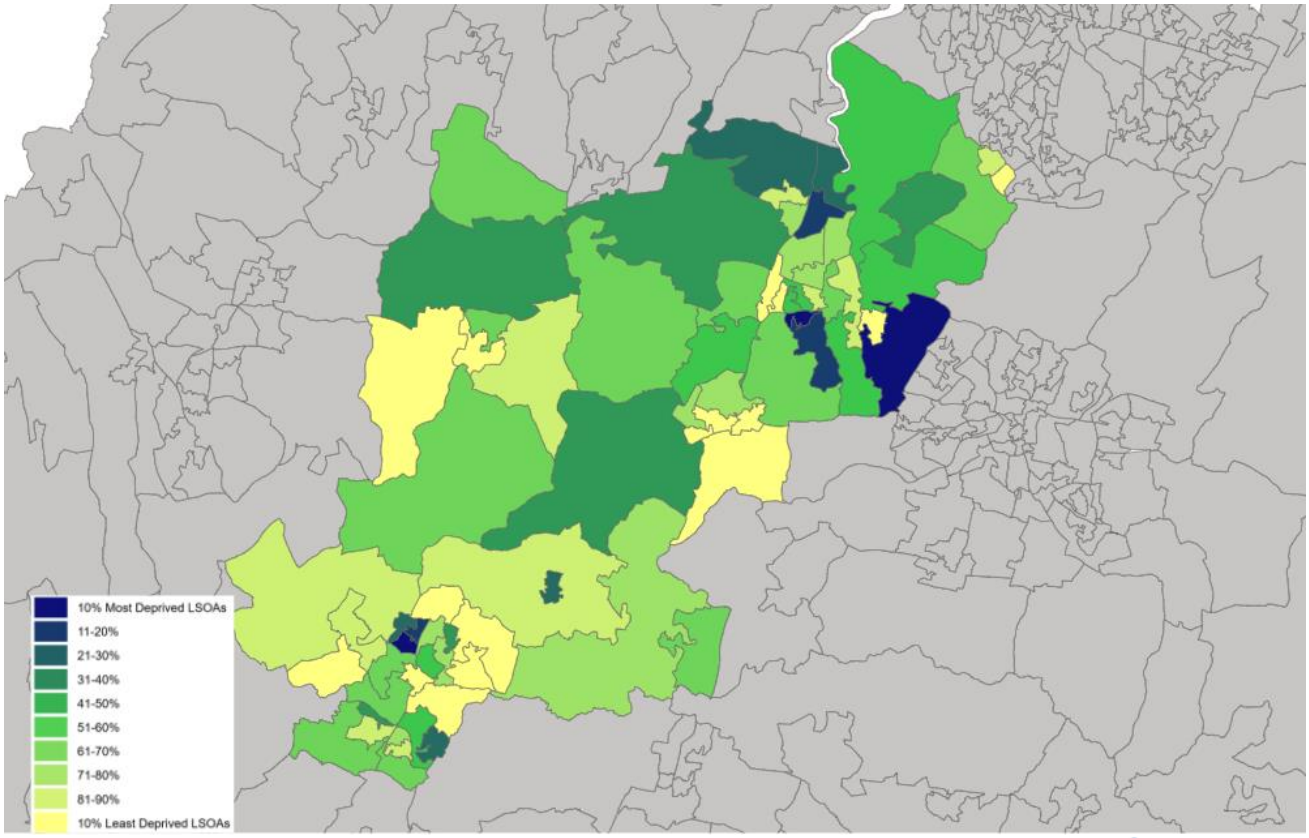
Source: Kent Analytics and other data sources[3,6,8,9,10] (see 4.3)

3.3.2 Deprivation

We know from research on digital inclusion that it can be seen as a form of inequality, with a strong relationship between digital exclusion and deprivation. The Index of Multiple Deprivation (IMD2019) is the official measure of relative deprivation in England. Kent Analytics produce a report on deprivation in Kent (see this bulletin for further information on the Index of Deprivation and how it relates to Kent).

Figure 7 illustrates the pattern of deprivation across Tonbridge and Malling. There are no LSOAs that are in the 10% most deprived LSOAs in the UK.

Figure 7. Map of the pattern of deprivation at LSOA level. The darker areas are the most deprived and the lighter areas are the least deprived.



Source: MHCLG, IMD2019[3]

3.3.3 Likelihood of responding digitally

The 2021 Census was undertaken using an online questionnaire as the primary response mode. The Office for National Statistics (ONS) recognised that people who are digitally excluded would require digital assistance or a way to respond to the Census that may not be via the primary mode. The ONS therefore developed a Hard-to-Count (HtC) index to identify sub-populations at the LSOA level at risk of Census non-response. This index is composed of two domains: the digital domain and the willingness to self-respond domain.

Table 1 shows the breakdown of the HtC index in Tonbridge and Malling, Kent and for the UK as a whole. Overall, 20% of LSOAs in the UK are categorised in the hardest to count group (i.e., HtC3-5), 16.4% of LSOAs in Kent and 13.6% of LSOAs in Tonbridge and Malling. The proportion of LSOAs in Tonbridge and Malling categorised in the most likely to digitally access the Census (i.e., HtC1) is higher than the UK proportion.

Table 1. Kent has a lower proportion of LSOAs categorised as least likely to digitally access the Census (1 most likely, 5 least likely).

Hard-to-Count Index	Proportion of LSOAs in Tonbridge and Malling	Proportion of LSOAs in Kent	Proportion of LSOAs in UK
1	45.6%	31.6%	40%
2	40.8%	52.0%	40%
3	5.8%	10.8%	10%
4	7.8%	5.6%	8%
5	0.0%	0.0%	2%

Source: ONS[7]

3.3.4 Lower levels of internet use

Using the Mosaic segmentation tool, we have calculated the proportion of households in an LSOA that are significantly likely to use the Internet less than every day (see Experian's Mosaic for further information about this tool).

In Tonbridge and Malling, the average proportion of households who use the Internet less than every day for LSOAs in Tonbridge and Malling is 12.6% (CI 11.4-13.7%) which is significantly lower than for Kent (17.9%; CI 17.3-18.2%). Interestingly, almost 41.8% of households in an LSOA in Tonbridge and Malling are likely to not use the Internet every day as compared to 0.0% of households in another LSOA in the same district, highlighting the marked disparity in Internet use within the district.

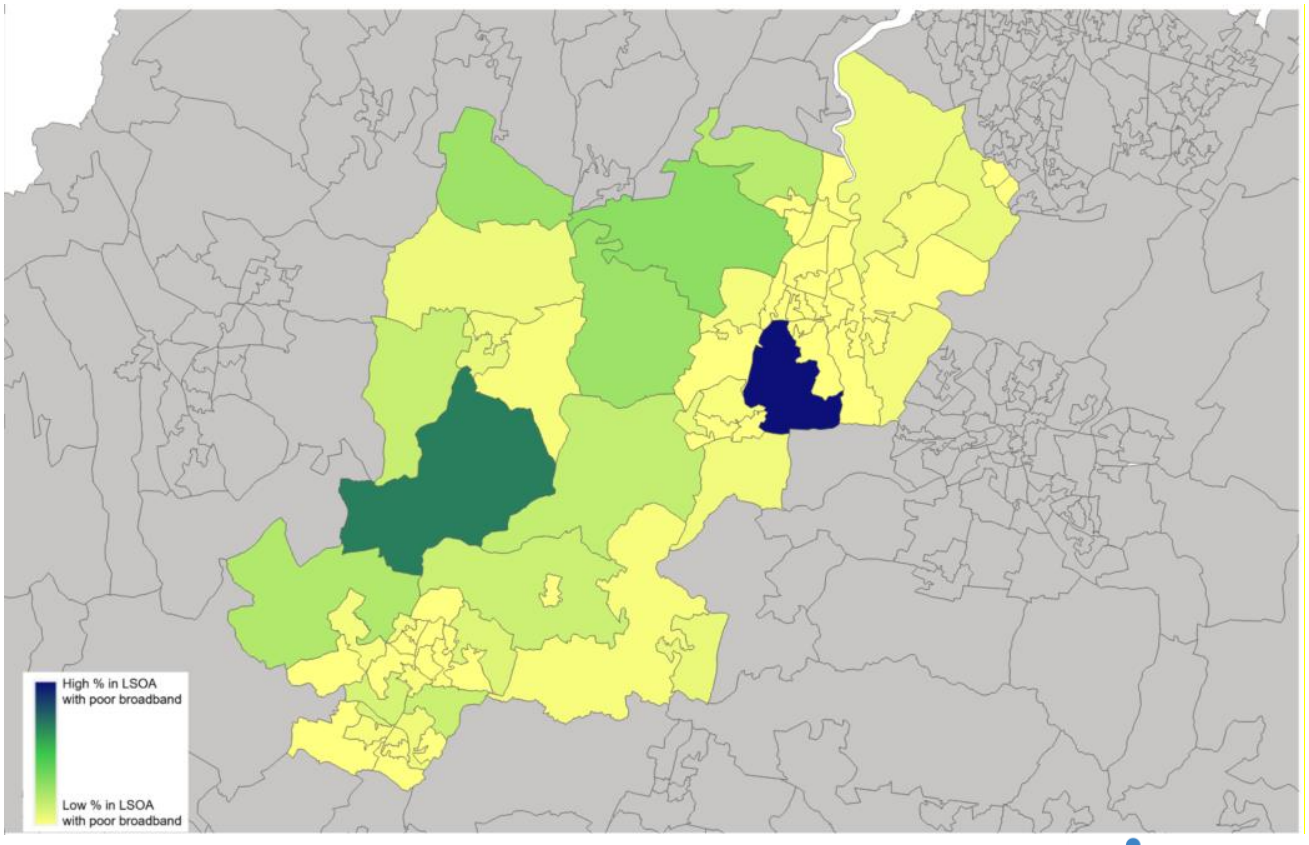
3.3.5 Broadband speeds and connectivity

An important element of digital inclusion is connectivity, i.e., having access to the Internet. The Government has defined a decent connection as one that can deliver 10 megabits per second (Mbps) download speed and 1 Mbps upload speed (along with other defined quality parameters).

The average broadband speed in the UK is 64Mbps and in Kent is 66Mbps (CI 65.8-67.3Mbps). In Tonbridge and Malling, the average broadband speed per LSOA is significantly higher than Kent at 72.22Mbps (CI 70.31-74.14Mbps). There is a clear divide between rural and urban LSOAs with urban LSOAs receiving an average broadband speed of 81.47Mbps and rural LSOAs receiving an average broadband speed of 53.73Mbps.

In Tonbridge and Malling, the average proportion of households per LSOA with poor broadband is 0.4% (CI 0.3-0.5%) which is significantly lower than Kent (0.5%; CI 0.5-0.6%). Figure 8 illustrates the pattern of proportion of households with poor broadband at LSOA level. The map shows a higher proportion with poor broadband in rural areas. The darkest LSOA on the map (Tonbridge and Malling 014A) has 6.95% of households receiving poor broadband. Again, there is a clear divide between rural and urban LSOAs, with 0.7% of households in rural LSOAs receiving poor broadband compared to 0.3% of households in urban LSOAs.

Figure 8. Map of the pattern of proportion of households with poor broadband at LSOA level. The darker areas have the highest levels of poor broadband and the lighter areas have the lowest levels of poor broadband.



Source: Ofcom[5]

4 Methods

4.1 Experian's Mosaic

Mosaic is a classification system designed by Experian to profile the characteristics of the UK population. Each household in the UK is classified as belonging to one of 66 types, which fall into a broader range of 15 groups, shown in the table below. These types and groups describe the resident of a household in terms of their typical demographics, their behaviour, their lifestyle characteristics, and their attitudes.

Table. Mosaic group summaries

A. Country Living (8.1%)	*Well-off owners in rural locations enjoying the benefits of country life*
B. Prestige Positions (9.5%)	*Established families in large detached homes living upmarket lifestyles*
C. City Prosperity (0.6%)	*High status city dwellers living in central locations and pursuing careers*
D. Domestic Success (8.7%)	*Thriving families who are busy bringing up children and following careers*
E. Suburban Security (8.0%)	*Mature suburban owners living in settled lives in mid-range housing*
F. Senior Security (10.2%)	*Elderly people with assets who are enjoying a comfortable retirement*
G. Rural Reality (6.9%)	*Householders living in inexpensive homes in village communities*
H. Aspiring Homemakers (11.9%)	*Younger households settling down in housing priced within their means*
I. Urban Cohesion (2.0%)	*Residents of settled urban communities with a strong sense of identity*
J. Rental Hubs (7.7%)	*Educated young people privately renting in urban neighbourhoods*
K. Modest Traditions (4.6%)	*Mature homeowners of value homes enjoying stable lifestyles*
L. Transient Renters (5.7%)	*Single people privately renting low cost homes for the short term*
M. Family Basics (7.9%)	*Families with limited resources who have to budget to make ends meet*
N. Vintage Value (6.0%)	*Elderly people reliant on support to meet financial or practical needs*
O. Municipal Challenge (1.6%)	*Urban renters of social housing facing an array of challenges*

Experian produces a Grand Index table showing the Mosaic profiles of over 400 variables, ranging from demographics, property, work/home lives, finance, perspectives, education, health, engagement and communication and online activity.

Using the index of each Mosaic group for each variable, it is possible to identify if they are more or less likely to be part of that variable. An index of 100 means that taking the group's population size into account, the expected number are part of that variable, whereas if the index is over 100, more than the expected proportion are part of that variable, and an index under 100 is less than expected.

For example, looking at the variable of a property with more than 5 bedrooms, the most affluent group A has an index of 429, meaning they are 4 times more likely to have a house with more than 5 bedrooms. Whereas the most deprived group O has an index of only 9, meaning they are very unlikely to have a house with more than 5 bedrooms.

4.2 2018 Internet User Classification

The IUC provides 10 unique profiles of neighbourhoods based on a number of characteristics. These profiles are described below.

e-Cultural Creators	High levels of Internet engagement, particularly regarding social networks, communication, streaming and gaming, but relatively low levels of online shopping, besides groceries.
e-Professionals	High levels of Internet engagement, and comprises fairly young populations of urban professionals, typically aged between 25 and 34. They are experienced users and engage with the Internet daily and in a variety of settings.
e-Veterans	Affluent families, usually located within low-density suburbs, with populations of mainly middle-aged and highly qualified professionals. Higher levels of engagement for information seeking, online services and shopping, less for social networks or gaming.
Youthful Urban Fringe	Reside at the edge of city centres and deprived inner city areas, ethnically diverse, young, large student and informal household populations, access via mobile devices. High levels of Internet engagement are average overall, with high levels of social media usage
e-Rational Utilitarians	Comprising mainly rural/semi-rural areas with higher than average retired populations, constrained by poor infrastructure. Users undertake online shopping, the Internet is used as a utility rather than a conduit for entertainment.
e-Mainstream	Exhibit typical Internet user characteristics in heterogeneous neighbourhoods at the periphery of urban areas or in transitional neighbourhoods.
Passive and Uncommitted Users	Limited or no interaction with the Internet. They tend to reside outside city centres and close to the suburbs or semi-rural areas. Higher levels of employment in semi-skilled and blue-collar occupations.
Digital Seniors	Typically White British, retired and relatively affluent. Average use of the Internet, typically using a personal computer at home. Despite being infrequent users, they are adept enough to use the Internet for information seeking, financial services and online shopping.
Settled offline Communities	Elderly, White British, in semi-rural areas. They undertake only limited engagement with the Internet, they may have only rare access or indeed no access to it at all.
e-Withdrawn	Least engaged with the Internet. Deprived neighbourhoods of urban regions. Highest rate of unemployment and social housing among all Lowest rates of engagement in terms of information seeking and financial services, as well as the lowest rate in terms of online access via a mobile device.

4.3 Digital Exclusion Scoring

A 'Digital Exclusion Score' was calculated for each LSOA based on the identified digitally excluded populations[4] and relevant data sources that could be determined at the LSOA level. A higher score indicates that an LSOA has more digitally excluded populations and is therefore more at risk of digital exclusion.

Indicator	Metric	Source
Older people	% over 65	ONS Midyear estimates 2019[8]
Lower income groups	Index of Multiple Deprivation	MHCLG IMD2019[3]
Unemployed	% unemployment	ONS Census 2011[6]
	% Universal Credit claimants	ONS May 2021[10]
Social housing	% in social housing	ONS Census 2011[6]
Disabilities	% daily activities limited	ONS Census 2011[6]
Fewer educational qualifications	% no qualification	ONS Census 2011[6]
Rural areas	Rural/urban classification	ONS Rural Urban Classification[9]
English not as first language	% whose first language is not English	ONS Census 2011[6]

Steps for calculation of the 'Digital Exclusion Score':

1. Metrics were reversed scored so that for all metrics, a higher score was better
2. Each LSOA was ranked from 1 to 1065 for each metric
3. This rank was converted into a rank ratio (i.e., converted to a score between 0 and 1)
4. The rank ratios were summed to create a composite score
5. This composite score was converted into an overall Digital Exclusion Score between 0 to 100

This method was used as opposed to alternatives (such as summing z-scores to create a composite) to minimise effects of variability on the scoring.

5 Sources

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