Ofcom Technology Tracker 2022 - Technical Report

This report details the methodology and technical specification for the 2022 Technology Tracker study, which has been run by BMG Research on behalf of Ofcom. The objective of the survey is to track the attitudes and behaviour of UK consumers with respect to residential telecommunications, broadcasting and the internet.

1.1 Approach

Fieldwork for the survey took place using a primarily face-to-face methodology whereby respondents were interviewed on the doorstep with the interviewer recording answers on to an interactive version of the survey on a tablet device. For a small number of cases where respondents were interested in taking part but not able to do so while the interviewer was present, alternative methodologies using online and postal return surveys were supplied. This approach is detailed further in section 1.3.1 of this report.

In total BMG Research interviewed 4,003 adults, aged 16+, across the United Kingdom, between February 1st and May 8th 2022. Interviews were carried out across 315 different sampling units across the UK with 12 or 13 interviews carried out in each. Each interview took approximately 20 minutes to complete.

In England representative quotas were set by government office region (GOR), but in each of the devolved nations (Scotland, Wales, Northern Ireland) a boost was placed on the sample to allow for sub-group analysis within each nation. Within each region quotas were then applied so that each is representative by age, gender and socio-economic group (SEG). These regional quotas were then applied down to the level of each sampling unit to provide 315 representative snapshots of the UK population. After fieldwork, weights were also applied to data so that it was representative of the UK population by age, gender, SEG, working status, region and cabled/non-cabled area.

Further details of the sampling frame, research methodology, weighting procedures and reporting are outlined in the following pages. The SPSS files from the study are available on request.

1.2 Sample design

Due to restrictions imposed by the COVID-19 pandemic in 2021, fieldwork was unable to take place via a face-to-face methodology. With those restrictions lifted for 2022 the survey was able to return to the same sampling approach and methodology as 2020 and previous waves. As such, 2022 data can be compared to data for 2020 and earlier. However, 2022 data should not be compared to 2021 data as the approaches differed considerably.

1.2.1 Setting up sampling units

The target sample of 4,000 was split across 315 sampling units, giving a target of 12 or 13 interviews in each sampling unit. Output Areas (OAs) were used as the basic building block for sampling. These were then stratified by region, then within region along a 6-point urban/rural categorisation. Quota control was applied per region by three key variables (age, gender, socio-economic grade) to control the sample and ensure the units in a given region added up to be representative of each. In Scotland some SUs comprised of multiple OAs due to low populations in individual OAs. All OAs that were combined in this way were neighbouring.

A boosted sample of 500 in each of the devolved nations (Scotland, Wales, Northern Ireland), meant that a higher proportion of the sampling units were placed in each of these regions. The remainder were split across England to be representative of GOR by population size. Please see the table below for the breakdown of sampling units per region.

Region (GOR)	Sampling units
East Midlands	17
East of England	22
London	30
North East	10
North West	26
South East	32
South West	20
West Midlands	21
Yorkshire and The Humber	20
Scotland	39
Northern Ireland	39
Wales	39

Once the sample was extracted and sorted, it was checked for close correspondence to the UK population by deprivation - using indices of multiple deprivation (IMD) – and cabled/non-cabled areas – using a database supplied by Ofcom.

Because of the differing profile of each region, sampling units were not created to be uniform in size, but instead an SU is measured by the number of addresses it contains. The SUs were selected with a probability proportionate to size. This was done by grouping the SUs into size bands, then those with a larger population were assigned a higher probability of being selected, those with a smaller population were made less likely to be selected. This ensures that all households within an SU have an equal chance of being selected, regardless of the size of the SU in which a household is situated. Each address selected within an SU was assigned an ID.

1.2.2 Quotas

As mentioned in the previous section, the sample was designed to be representative of the UK population (with a boost in devolved nations).

This was built from the foundations of the sample upwards. Each SU was set individual quotas by age (16-24, 25-44, 45-64, 65+), gender (male, female), and socio-economic grade (AB, C1, C2, DE).

Quotas for fieldwork were set using 2011 Census data for Great Britain and Northern Ireland, with age quotas set using the ONS 2020 mid-year population estimates (released June 2021). Compared to the Census 2011, the 2020 mid-year population estimates indicate a small (3%) downward shift in the incidence of adults aged under 45 and a small (3%) upward shift in the incidence of adults aged 65 and over.

The below table shows the quotas set for this project.

Demographic	Quota set	Interviews achieved - unweighted	Weighted sample
Gender – Male	49%	49%	49%
Gender – Female	51%	51%	51%
Age – 16-24	15%	11%	12%
Age – 25-44	33%	32%	35%
Age – 45-64	32%	33%	32%
Age – 65+	20%	25%	21%
SEG – AB	22%	27%	26%
SEG – C1	31%	24%	27%
SEG – C2	22%	17%	22%

SEG - DE	26%	32%	25%

1.3 Fieldwork

Fieldwork took place between the February 1st and May 8th 2022. Interviewers were assigned to each SU, and in order to help control sample they were provided with a selection of addresses to approach within each. On average an SU contained 154 addresses. Only one interview could be conducted per address. If more than one person in the household met the quota a respondent was selected using the birthday method (i.e. the person who will be the next to have a birthday).

With the lifting of most COVID-19 restrictions since the 2021 fieldwork, the methodology was able to return to the approach used between 2017 and 2020, a CAPI (Computer Assisted Personal Interviewing) led method. However, in order to provide flexibility for those still nervous about the pandemic, or unable to take part at the time when the interview reached them, online and paper methodologies were provided as alternatives. The process for determining which medium was selected is detailed in the below section.

1.3.1 Medium selection

Before fieldwork began, three identical scripts were set up; a primary CAPI script, and secondary CAWI (Computer Assisted Web Interviewing) online script and paper script to be printed in booklets.

Interviewers were instructed that completing the interview in person on the doorstep was the desired completion method, but they were also provided with a limited number of online invites and paper copies which could be passed to respondents who were clearly interested in completing, but unable or unwilling to do so in person. When approaching a potential respondent, the interviewers were instructed to first attempt to recruit the individual to take part in person. If they were successful interviews were then conducted on the doorstep, the interviewer using a tablet device to enter respondents' answers into the CAPI script with the aid of showcards for more complex questions.

If the respondent was hesitant to take part, but the interviewer assessed that their interest was genuine, they were then provided with the option to take part online or via paper copy.

For the online version respondents were given a letter which contained a URL link and unique ID. The interviewer logged within their CAPI script that this option had been provided and assigned the unique ID to the address ID in order for responses to be matched up with the SU. The respondent was then able to complete the survey in their own time using their unique ID to log in to the CAWI script.

The process was similar for a paper script, but rather than a letter with a URL link, respondents were provided with a paper copy and pre-paid return envelope. A unique ID was assigned in the same way as the online process.

Towards the end of the fieldwork period respondents who had been provided an online or paper copy but not completed were sent reminder emails. These used an email address collected from the respondent by the interviewer when they had logged that the alternative methodology had been requested.

1.3.2 Interviewer and respondent incentivisation

Interviewers were incentivised per completion they achieved. In order to encourage in person responses, they were paid more to complete via the CAPI than via online or paper methodologies. Interviewers were also only supplied with a limited number of online letters and paper copies so they could not hand these out to more than 20% of their assigned sample.

Respondents were offered a £10 shopping voucher for completing via any methodology.

1.4 Weighting

The survey data used for this report is weighted to ensure the data is representative of the UK population aged 16+.

Rim weighting was applied to age, gender, SEG, working status, region and cabled/non-cabled. Cabled/non-cabled were defined using information on the coverage of different levels of broadband connection, supplied by Ofcom to BMG Research. Cabled areas were defined as postcode areas (first three digits of a postcode) which had at least 50% coverage of either gigabit or ultra-fast broadband.

A full unweighted and weighted breakdown of the final sample can be seen in the table below.

Demographic	Interviews achieved - unweighted	Weighted sample
Gender – Male	49%	49%
Gender – Female	51%	51%
Age – 16-34	26%	29%
Age – 35-54	32%	34%
Age – 55+	42%	37%
SEG – AB	27%	26%

SEG – C1	24%	27%
SEG – C2	17%	22%
SEG - DE	32%	25%
Working status – working	53%	58%
Working status – not working	47%	42%
Region – London	9%	12%
Region – South East	10%	14%
Region – South West	6%	9%
Region – East of England	7%	9%
Region – West Midlands	7%	9%
Region – East Midlands	5%	7%
Region – Yorkshire & Humber	6%	8%
Region – North East	3%	4%
Region – North West	8%	11%
Region – Scotland	12%	9%
Region – Wales	13%	5%
Region – Northern Ireland	12%	3%
Cable	64%	49%
Non-cable	36%	51%

The percentages described above as '% Weighted' are the targets used to weight the data. The figures for age, gender and location are taken from the 2011 Census, with age quotas updated to align with the ONS 2020 mid-year population estimates. The '% Unweighted' column shows the actual percentage of interviews achieved in the February to May 2022 fieldwork.

To ensure an adequate sample size for sub-group analysis in each of the devolved nations, respondents in these regions were purposefully oversampled. However,

weighting ensures that the total sample is not skewed as the proportion of those in each region is adjusted to be representative.[1]

1.5 Reporting

Throughout the data tables, significant differences are signified between sub-groups and the total result. Differences to the total are signified by a + or – symbol next to the percentage figure, differences to other groups within the crossbreak set (e.g. region) are signified by letters below the percentage figure – these letters applied to each column appear below the crossbreak name. Differences are considered to be significant at the 95% confidence level, meaning that there is only a 5% possibility that the difference occurred by chance rather than by being a real difference. This is a commonly accepted level of confidence. BMG also provided Ofcom with tables sig tested to 99% confidence level, differences in these tables are less likely to be flagged as significant but those that are only have a 1% possibility that the difference occurred by chance.

The data used in this report are rounded up or down to the nearest whole percentage. It is for this reason that, on occasion, tables or charts may add up to 99% or 101%. Results that do differ in this way should not have a sum-total deviance that is larger than around 1% to 2%.

In the tables and charts contained in this report, a * symbol denotes a proportion that is less than 0.5%, but greater than zero.

Because of the nature of the sample construction, quotas, and weighting used, when reporting it is necessary to state that the data represents the percentage of adults rather than the percentage of households.

Within each wave of research, we ask a set of core questions relating to these topic areas: take-up and use of landline, mobile phone, internet, television, radio, devices, and subscription services. Other questions asked may vary wave on wave.

Appendix. Guide to statistical reliability

The variation between the sample results and the ‘true’ values (the findings that would have been obtained if everyone had been interviewed) can be predicted from the sample sizes on which the results are based, and on the number of times that a particular answer is given. The confidence with which we can make this prediction is usually chosen to be 95%, that is, the chances are 95 in 100 that the ‘true’ values will fall within a specified range. However, as the sample is weighted, we need to use the effective sample size rather than actual sample size to judge the accuracy of results. The following table compares effective sample size and unweighted sample for some of the main analysis groups.

[1] 500 respondents were interviewed in each of Scotland, Wales, and Northern Ireland, but the weighted base is 360, 200, and 120 respectively.

Demographic	Unweighted base	Effective sample size
Gender – Male	1951	1350
Gender – Female	2050	1377
Age – 16-34	1036	723
Age – 35-54	1271	893
Age – 55+	1696	1134
SEG – AB	1071	716
SEG – C1	942	665
SEG – C2	675	500
SEG - DE	1251	863
Working status – working	1834	1284
Working status – not working	1673	1112
Region – London	374	310
Region – South East	411	332
Region – South West	249	211
Region – East of England	280	221
Region – West Midlands	263	210
Region – East Midlands	215	180
Region – Yorkshire & Humber	253	205
Region – North East	125	103
Region – North West	326	269
Region – Scotland	500	377
Region – Wales	501	462
Region – Northern Ireland	500	469

The table below illustrates the required ranges for different sample sizes and percentage results at the 95% confidence interval.

Effective sample size	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Total – 2729	1.6%	2.1%	2.5%	2.6%	2.7%
Female - 1377	2.2%	2.9%	3.4%	3.7%	3.8%
SEG:C2 - 500	3.5%	4.8%	5.6%	6.0%	6.2%
Region: North East - 103	6.8%	9.8%	11.7%	12.9%	13.6%

For example, if 30% or 70% of a sample of 2,729 give a particular answer, the chances are 95 in 100 that the 'true' value will fall within the range of + 2.5 percentage points from the sample results.

When results are compared between separate groups within a sample, different results may be obtained. The difference may be 'real', or it may occur by chance (because not everyone has been interviewed). To test if the difference is a real one – i.e. if it is 'statistically significant' – we again must know the size of the samples, the percentages giving a certain answer and the degree of confidence chosen. If we assume '95% confidence interval', the difference between two sample results must be greater than the values given in the table below to be significant.

Effective sample size	10% or 90%	20% or 80%	30% or 70%	40% or 60%	50%
Male – 1350 vs. Female – 1377	2.2%	3.0%	3.4%	3.7%	3.8%
London – 310 vs. Scotland – 377	4.1%	5.7%	6.7%	7.2%	7.5%