PAMCo SLA Technical Appendix 2021 Report

Introduction
Item 5.5.2 of PAMCo Service Level Agreement reporting requires Ipsos to provide an annual technical appendix report no later than one month after delivery to the bureaux of the annual dataset.

Overview of Methodology
PAMCo – Audience Measurement for Publishers is the audience measurement currency for published media. It produces de-duplicated brand reach allowing users to carry out reach & frequency planning and also plan and trade audiences across all the platforms on which published media content is delivered – phone, tablet, desktop and print.

The PAMCo currency is platform neutral and includes the following:

- De-duplicated reach and frequency for all platforms
- A large number of brands reported across all platforms
- Data from a single source dataset to help inform duplication between print and digital
- Reporting newsbrand sections across print AND digital
- Engagement data

PAMCo's world-leading methodology integrates data from two sources to provide a complete view of publisher audiences.

1. A high-quality face-to-face survey of 22,000 participants per year to collect print readership and demographic data.
2. A respondent level data file from Ipsos iris, UKOM's chosen digital audience supplier, which makes it possible to integrate fully smartphone and tablet audiences as well as PC/laptop audiences. A data integration methodology has been developed to fuse the digital estimates with the readership/enumeration survey.

This report includes the following sections:

<u>Survey</u>

<u>Data Integration</u>

THE SAMPLE

The Population Sampled

The sample is designed to be representative of the adult population aged 15+ of Great Britain. The survey population for January to December 2021 is estimated to have been approximately 53,927,883 according to JICPOP's mid 2021 projections based on 2011 census data.

The target sample size is 22,000 per annum and the sample achieved from the 2021 sample points is 19,790.

It is important to note that the PAMCo data published as Q1-Q4 2021 includes not only the 1,616 sample points drawn for 2021 data collection but also 417 sample points from Q4 2020. Whilst the methodology and response rate information contained in this document relate specifically to the 1,616 sample points for 2021, the details of weighting efficiency, and the full sample composition report that will accompany this report as an appendix, include the full new method sample included within the releases known as Bridge 3 2021, Bridge 4 2021 and Bridge 1 2022. See 'Data Collection' for further details of the fieldwork timing.

The table below summarises the relationship between the sample drawn for 2021 fieldwork and the data reported as part of the 2021 dataset.

	Sample points from 2020 sample	Reporting sample from 2020 sample	Sample points from 2021 sample	Reporting sample from 2021 sample	Total reporting sample (excl. clones).in 2021
Q1/2 2021	417	5,511	278	3,756	9,267
Q3 2021			740	8,976	8,976
Q4 2021			598	7,058	7,058
TOTAL	**417**	**5,511**	**1,616**	**19,790**	**25,301**

Note that Q2 2021 does not contain new sample but is an exact replicate of Q1 2021. With the inclusion of the replicates, the sample size for data labelled as 2021 is 34,568

Overview of the PAMCo Methodology

Since September 2020, PAMCo is using a new methodology known as 'online first'. Plans to test this method were accelerated when Covid struck in March 2020, as it was no longer possible to continue conducting face-to-face in-home interviews.

'Online first' is a two-phase method:

- It starts with a postal phase. Sampled addresses are mailed and up to two household members aged 15+ are invited to complete an online (or paper) self-completion questionnaire. There are three mailings in total, in order to maximise response, with the paper questionnaire sent to all non-responders in the third mailing.
- This is followed by a field stage when non-responsive households are visited in-person by Ipsos interviewers to encourage completion online or on paper. Participants can also be offered a tablet to complete the interview. From October 2021, the option of in-home CAPI interviewing was re-introduced.

- A minimum of three calls is prescribed at the field stage for each potentially productive address, before attempts to interview can be abandoned. Interviewers are encouraged to make as many calls as possible, varying them by time of day.
- The in-person visits to non-responsive households are essential to obtain a representative sample. Around half the completed questionnaires come from this field phase.

See 'Data Collection' for further detail of the number of interviews achieved from each stage and mode of data collection.

Overview of the PAMCo Sample
PAMCo has a multi-stage disproportional pre-selected sample design.

The three stages of sampling are as follows:

1) Selection of sampling points (1616 points for 2021)
2) Selection of addresses
3) Selection of individuals

The sampling frame for the selection of sampling points comprises all Output Areas (OAs) in Great Britain. In 2021, two OAs were selected for most sampling points.

The sampling frame for the selection of addresses is the Postal Address File (PAF).

At the postal stage addresses in each sample point are invited through a postal invitation and up to two household members are invited to take part.

At the field stage, interviewers are issued with all addresses that have not completed the survey at the postal stage (and have not declined the interviewer visit). At each household contacted, (see below for the household definition), eligible individuals aged 15+ are enumerated. The final stage of the sampling is then to select which of these eligible individuals should be interviewed. One individual is selected in most households, and up to two individuals in larger households. The rules as to how this is done are described later in this document.

Household definition
For PAMCo, a household is defined as:

'One person or a group of people who have the accommodation as their only or main residence'
        AND
'For a group of people a household should have some form of common living arrangement – that is they share some of the living accommodation'

Shared living accommodation may include:
- a living room
- a dining room
- a living or dining room which is part of the kitchen
- it would still count if the living room has to be used as a bedroom

However, a group of people is not counted as a single household solely on the basis of a shared bathroom / toilet.

Selection of Sampling Points

The first stage of sampling is to select the sample points (or locations) where interviews will be carried out. Before this is done, certain ACORN areas are upweighted (and others downweighted). This is done so as to oversample areas with particularly high penetration of individuals with AB social grades, and therefore increase the number of interviews taken with AB participants.

The steps taken to select the sampling points were as follows:

a) Sampling weights were applied to the adult populations of OAs by 7 categories of ACORN Types, as follows:

Category	ACORN Types	Weights Applied
1	1, 2, 3	1.91
2	4, 5, 7, 8, 9, 14, 16	1.63
3	6, 10, 15, 17, 61	1.36
4	11, 12, 13, 18, 19, 20, 21, 22, 24, 26, 32, 62, 00	1.11
5	23, 25, 28, 29, 31, 33, 34, 37, 53, 54, 60	1.01
6	27, 30, 36, 38, 41, 49, 50	0.74
7	35, 39, 40, 42, 43, 44, 45, 46, 47, 48, 51, 52, 55, 56, 57, 58, 59	0.65

b) Great Britain was divided into 60 area groupings, devised for PAMCo. Ultimately these areas were individually weighted and used to piece together the Government Office Region and non-overlap ISBA TV regions.

A full list of the 60 areas can be found overleaf. For the purposes of sampling, the area groupings were further sub-divided into district groupings.

c) The weighted adult populations of each of the 60 area groupings were calculated. The target number of sampling points for each area grouping was then set. The total number of points at this stage was 1,616 per annum.

d) Within each area grouping, OAs were ranked in descending order by district grouping, then within district by ACORN category, and finally within ACORN category by NS-SEC.

e) The required number of OAs within each area grouping as specified at b) was then selected with probability proportional to weighted adult populations, using random start/fixed sampling interval procedures.

f) Any selected OA falling into a 'no-go' area was replaced with one in the sample District and same ACORN Type with population size closest to the originally selected OA.

g) Modified procedures were applied in Scotland in areas 49, 50, 51, 52, 56, 57, 58 and 59. In these areas the target number of points was increased, relative to other areas, to the numbers shown in the table below. This is to allow for larger analysis samples for smaller regional newspapers in Scotland.

The area groupings used and the target number of Sampling Points selected were as follows:

England and Wales

Area Groupings	Government Office Region	ISBA Area	No. of Points Selected
1	South West	South West	44
2	South West	Southern	24
3	South East	Southern	40
4	South East	Southern	20
5	South East	Southern	28
6	South East	Southern	52
7	South East	London	40
8	East of England	London	56
9	Greater London	London	36
10	Greater London	London	72
11	Greater London	London	48
12	Greater London	London	52
13	East of England	East of England	36
14	East Midlands	East of England	16
15	South East	London	24
16	East of England	East of England	24
17	East of England	East of England	36
18	South East	Midlands	28
19	South West	Midlands	16
20	West Midlands	Midlands	44
21	West Midlands	Midlands	28
22	Greater London	London	32
23	West Midlands	Midlands	16
24	West Midlands	Midlands	16
25	West Midlands	Midlands	28
26	East Midlands	Midlands	24
27	East Midlands	Midlands	20
28	East Midlands	Midlands	24
29	Wales	Wales and the West	8
30	Wales	Wales and the West	24
31	Wales	Wales and the West	28
32	North West	Border	12
33	South West	Wales and the West	20
34	South West	Wales and the West	36
35	Yorkshire and the Humber	Yorkshire	48
36	Yorkshire and the Humber	Yorkshire	28
37	Yorkshire and the Humber	Yorkshire	24
38	East Midlands	Yorkshire	28
39	Wales	Lancashire	8
40	North West	Lancashire	36
41	North West	Lancashire	36
42	North West	Lancashire	16
43	North West	Lancashire	28
44	North West	Lancashire	32
45	Yorkshire and the Humber	North East	16
46	North East	North East	28
47	North East	North East	12
48	North East	North East	12

Scotland

Area Groupings	Area Names	No. of Points Selected
49	Aberdeen	8
50	Dundee	8
51	Edinburgh	24
52	Strathclyde, urban	64
53	Strathclyde, rural	24
54	Lothian	12
55	Central	12
56	Fife	12
57	Other Tayside	12
58	Other Grampian	12
59	Highland*	12
60	Scottish Borders	12

* Includes one sample point per year for each of the Western Isles, Orkney and Shetland.

Allocation to Month and Start Day

The selected sampling points were systematically allocated to four quarters and sub-divided into two batches in each quarter, to ensure balanced quarterly samples. At the field stage, start days were allocated so that the number of completed interviews was as well distributed as possible across the 6 or 7 weeks of each fieldwork period.

Selection of Addresses

Within each selected pair of OAs, between 32 and 35 addresses were selected in each region, as shown below. Until the start of Q4 2021, 7 addresses were held back from the postal stage and were issued for the first time at the field stage. From Q4 2021, all addresses were issued at both postal and field stages.

	Number of points per year	Number of addresses per point	Total addresses
East Midlands	112	33	3696
Eastern	152	33	5016
London	240	35	8400
North East	52	33	1716
North West	160	32	5120
Scotland*	212	32	6784
South East	232	33	7656
South West	140	33	4620
Wales	68	32	2176
West Midlands	132	33	4356
Yorks & Humber	116	32	3712
TOTAL	**1616**	**Ave. 32.95**	**53252**

Addresses are issued to the interviewer via the Electronic Contact Sheet (ECS) software on their tablet computer.

A minimum of three calls is prescribed for each potentially productive address, before attempts to interview could be abandoned. Interviewers were encouraged to make as many calls as possible, varying them by time of day.

Selection of Individuals
The selection of individuals at the field stage is done within the ECS using the following steps:

a) All selected addresses within each selected OA are allocated the letters P, Q, R and S consecutively.

b) For all issued addresses the ECS specifies the one or two persons to be interviewed, as follows:

Address Letter

No. of adults at address	P	Q	R	S
1	First	First	First	First
2	First	Second	First	Second
3	Second	First, Third	Second, Third	First
4	First, Fourth	Second, Third	First, Fourth	Second, Third
5	Second, Fourth	First, Fifth	First, Third	Second, Fifth
6+	First, Youngest	Third, Fifth	Second, Fifth	Fourth, Youngest

The ECS instructs interviewers to list all persons aged 15+ in a selected household, in descending order of age and the ECS then confirms the person(s) selected for interview, depending on the total number of adults at the address and the letter allocated to that address.

DATA COLLECTION AND RESPONSE RATES

Data Collection

The results on the following page are for the 2021 sample points and are based on fieldwork completed between 25 March 2021 and 03 January 2022. 2021 fieldwork was not undertaken prior to 25 March 2021 due to the Covid lockdown.

As described in the introduction to this document, the PAMCo methodology was adapted in response to the challenges of conducting in-home research during Covid restrictions and consists of a two-stage (postal/field) approach.

During the postal stage invitation letters are sent out to sampled addresses inviting up to two people per household take part via an online survey. The invitation letter is followed by up to two reminder letters, each sent a week apart. A paper questionnaire is included with the 2nd reminder letter. The postal stage is followed by a field stage.

Due to the continuing Covid restrictions, the field stage used only a 'knock-to-nudge' approach until Q4 2021, where facilitators visited each address (that had not already taken part or declined) to encourage participation in the research. In October and November restrictions eased allowing in-home CAPI interviewing to be included. Following a further tightening of restrictions on 6th December 2021 the field stage methodology reverted to a pure 'knock-to-nudge' approach.

A summary of the dates relating to the 2021 fieldwork is shown below:

Batch	Reporting Quarter	Sample points worked	Postal stage start date	Postal stage end date	Field stage start date	Field stage end date
Batch1	2021 Q1/2	**278**	25/03/2021	05/05/2021	17/05/2021	27/06/2021
Batch2	2021 Q3	**240**	17/05/2021	16/06/2021	28/06/2021	01/08/2021
Batch3	2021 Q3	**218**	21/06/2021	21/07/2021	02/08/2021	30/08/2021
Batch4	2021 Q3	**282**	19/07/2021	19/08/2021	31/08/2021	03/10/2021
Batch5	2021 Q4	**205**	23/08/2021	22/09/2021	04/10/2021	31/10/2021
Batch6	2021 Q4	**256**	20/09/2021	20/10/2021	01/11/2021	05/12/2021
Batch7	2021 Q4	**137**	25/10/2021	24/11/2021	06/12/2021	02/01/2021

Note:
In Batch 1-6, 7 addresses per sample point were excluded from the postal stage and only used in the field stage. From Batch 7 2021 these were included in the postal stage.

The table below summarises the composition of the 2021 sample by stage and by mode for each quarter.

		Q1/2	Q3	Q4	TOTAL	TOTAL %	
TOTAL	**TOTAL COMPLETES**	**3756**	**8976**	**7058**	**19790**	**100%**	
TOTAL	**COMPLETES - PAPER**	909	2348	1774	5031	25.4%	
TOTAL	**COMPLETES - ONLINE**	2847	6628	4767	14242	72.0%	
TOTAL	**COMPLETES - CAPI**	0	0	517	517	2.6%	
POSTAL	**TOTAL COMPLETES**	1845	4139	2995	8979	45.4%	**100%**
POSTAL	**COMPLETES - PAPER**	456	1022	703	2181	11.0%	24.3%
POSTAL	**COMPLETES - ONLINE OWN DEVICE**	1389	3117	2292	6798	34.4%	75.7%
FIELD	**TOTAL COMPLETES**	1911	4837	4063	10811	54.6%	**100%**
FIELD	**COMPLETES - PAPER**	453	1326	1071	2850	14.4%	26.4%
FIELD	**COMPLETES - ONLINE OWN DEVICE**	1228	3100	2189	6517	32.9%	60.3%
FIELD	**COMPLETES - ONLINE ANDROID**	218	403	279	900	4.5%	8.3%
FIELD	**COMPLETES - ONLINE INT video**	12	8	7	27	0.1%	0.2%
FIELD	**COMPLETES - CAPI**	0	0	517	517	2.6%	4.8%

Participant incentives

All participants in the 2021 PAMCo study receive a £20 incentive, either an Amazon e-voucher, Love2Shop e-voucher, Love2Shop giftcard (field stage only) or can opt for Ipsos to donate this sum to one of three designated charities on their behalf (NHS Charities Together, British Red Cross or Age UK).

Response rates

Overall response rate is calculated based on the total number of addresses in the sample excluding any addresses that were ineligible. Ineligible addresses include those that are; non-residential, where the address is occupied but not main residence, address that are demolished, derelict or under construction and those that are vacant/empty.

RESPONSE RATES - HOUSEHOLD LEVEL	2021
Total number of addresses	**53250**
Ineligible addresses in field stage	**2600**
Total number of addresses (excluding ineligibles)	**50650**
Total households (>0 complete) any stage	**16839**
Total households (>0 complete) postal stage	**7027**
Total households (>0 complete) field stage	**9812**
RESPONSE RATES (% of total number of addresses (excluding ineligibles)	
TOTAL HOUSEHOLD RESPONSE RATE	**33.2%**
POSTAL STAGE HH RESPONSE RATE	**13.9%**
FIELD STAGE HH RESPONSE RATE	**19.4%**

FIELD STAGE RESPONSE RATES - HOUSEHOLD LEVEL	2021
Total number of eligible addresses	**50650**
Total households (>0 complete) postal stage (B)	7027
Opt out address prior to field stage (C)	615
Total eligible addresses minus B & C	**43008**
% Field addresses with successful person selection	49.0%
% Field addresses with at least 1 complete	22.9%
% Field addresses AGREED but didn't complete	13.7%
% Field addresses NO FURTHER PROGRESS (after person selection)-	12.4%
% Field addresses with NO person selection	50.8%
% REFUSED without Person Selection	29.7%
% NO CONTACT	21.0%
% OTHER	0.1%

During the postal stage no random person selection procedure takes place. Instead, the invitation is for up to any two participants (aged 15+) per household. During the field stage the standard PAMCo person selection procedure is used.

Average number of completes per HH (based on total HH with at least 1 complete)	2021
TOTAL	**1.18**
POSTAL STAGE	1.28
FIELD STAGE	1.10

Of the selected persons, 76% agreed to complete the survey and 46% did so.

RESPONSE RATES – PERSON LEVEL	2021
Number of HH with person selection completed	**21068**
% PERSON SELECTION completed (of field stage address (excluding ineligibles)	**49.0%**
NUMBER OF SELECTED PERSONS	**23969**
AVG NUMBER OF SELECTED PERSONS PER ADDRESS	**1.14**
Agree but didn't complete - ALL (% of selected persons)	**30%**
Complete - ALL (% of selected persons)	**46%**
Refusal ALL (% of selected persons)	**17%**
Refusal by selected person (% of selected persons)	7%
Proxy refusal (% of selected persons)	10%
Other - ALL (% of selected persons)	**3%**
Other - Physically or mentally unable/ incompetent	1%
Other - Language difficulties	0%
Other - Away or in hospital throughout survey period	1%
Other - Ill at home during field period	0%
Other - other	2%
Unable to make contact with selected person (% of selected persons)	**4%**

RESPONSE RATES – PERSON LEVEL - % of those who agree to take part	2021
Online - % completion (of all that agreed)	54%
Paper - % completion (of all that agreed)	81%

The response rates include as completes not only the reportable sample but also those completes that were subsequently rejected at the editing stage. Main reasons for rejection were:

- Missing age group data
- More than two questionnaires per household (or two where there was only one selected person at the field stage)

Only 1% of completes were rejected overall, 1.6% at the field stage vs. 0.6% at the postal stage.

THE INTERVIEW

This section provides details of the PAMCo interview that has been deployed throughout the 2021 fieldwork. Key points regarding the interview are summarised below.

The online survey is device agnostic and therefore displays in a way that is most suited to the device used. When the CAPI mode is used, the interviewer uses a single screen tablet and shares the screen with the participant at the points in the interview where it is important for the participant to see the prompts.

The paper questionnaire incorporates almost all of the content from the online survey, with the exception of sections and supplements, and preserves the order of the content as far as is possible.

PAMCo is a brand-first interview. In the online and CAPI script publisher brands will initially be shown in groups of six (or five for national newspapers) and the participant will need to establish whether they have looked at or read any one or more from the group in the past 12 months. Then the individual brands that have been seen in the past 12 months are established before confirming whether the brand is read in print or on a screen, or in both formats. This is then followed by more detailed questions about reading on print and digital platforms respectively

PAMCo uses full colour masthead prompts for the readership questions, including non-date specific front covers for the magazines and newspaper supplements.

PAMCo asks specific questions about weekday and Saturday newspapers, showing separate weekday and Saturday paper front covers.

The PAMCo interview adapts the frequency scales used to the different types of publication:

Magazines	Almost Always (3 or 4 copies out of 4)
	Quite Often (2 copies out of 4)
	Occasionally (1 copy out of 4)
	Less often
Weekday newspapers	Almost Always (4 or 5 copies a week)
	Quite Often (2 or 3 copies a week)
	Occasionally (1 copy a week)
	Less often
Saturday and Sunday newspapers	Almost Always (3 or 4 copies a month)
	Quite Often (2 copies a month)
	Occasionally (1 copy a month)
	Less often

Average Issue Readership
The principle of measuring print 'readership' is to attempt to establish at each interview whether or not the person interviewed has looked at any copy of the publication in question during a period back from the day of interview equal to the interval at which the publication appears.

(Reading on the actual day of interview is not included). Thus, for each daily newspaper claimed to have been read in print in the past 12 months, the interview attempts to establish whether or not the person interviewed looked at a copy of it 'yesterday', the day before the interview. For newspapers that are published on 6 days a week, the 'Monday to Friday' and 'Saturday' edition are asked separately. For interviews conducted on Sunday or Monday, the equivalent of yesterday for the Monday to Friday edition is 'Friday'.

For each Saturday/Sunday newspaper or weekly magazine read in the past 12 months, the interview establishes whether or not the participant has looked at a copy of it in the past seven days, and for each monthly magazine, whether or not he or she has looked at a copy of it during the past four weeks. Other publication frequencies include fortnightly, bi-monthly and quarterly magazines.

Sections of the Interview
The PAMCo interview is divided into five main sections which are presented to the participant as follows:

1. Readership – including topics of interest, internet usage, readership
2. Classification – including household composition, identification of a Chief Income Earner, occupational details required for social grading, income, ethnicity, education level, ethnicity, sexual orientation and disability.
3. Shopping – including shopping in person and online and items browsed and purchased online in the last 12 months.
4. Internet Devices – covering the devices used by the participant that can connect to the internet
5. General Lifestyle – including future plans, motoring, holidays, travel and commuting, cinema, radio and television.

The following outlines the content of each section.

SECTION 1 - Introduction and Readership
The topic interest question appears at the start of the interview and presents the participant with 30 topics. The screen has the following prompt:

"The first question is about the topics that you read or look at in newspapers or magazines, whether in print, on a computer, on a tablet or on a mobile phone."

Two of the topics prompt further questions: 'News', which goes on to establish whether the participant reads or looks at national, local or regional news, and 'Sport' which prompts a further screen establishing which sports a participant reads or looks at.

This section also asks the participant about internet usage.

The readership section
The readership section, which uses a brand-first methodology, establishes which publications the participant has read in the past 12 months, whether in print or on screen, followed by more detailed questions on those that have been read in the past 12 months. Readership could be in the form of printed newspapers or magazines, or newspaper or magazine websites/apps that have been looked at on a PC, tablet or smartphone, including through links on social media.

Publisher brands are initially shown in groups of six (or five for national newspapers) and the participant determines whether they have read or looked at or any one or more from the group in the past 12 months. For the groups that are selected, the participant will be shown those groups again later and asked which individual brand(s) from the group they have read in the past 12 months.

The interview uses media list rotations to prompt brands as fairly as possible across the media list. The rotations for displaying publisher brands in groups of six are as follows:

Forward: Daily Newsbrands, Regional Daily Newsbrands, Magazines, Sunday Newsbrands
Reverse: Sunday Newsbrands, Magazines (in reverse order), Daily Newsbrands, Regional Daily Newsbrands

The order in which brands are displayed on-screen in groups is also rotated randomly, again to be fair to all brands. For a full summary of the media list rotations see page 22.

The interview then goes on to ask the participant whether the magazines or newspapers were read as a printed copy or on-screen via a website or app, or in both formats.

Example screenshots from the interview are below, to show how the questions appear on screen.

- Publisher brands (groups)

- Yes or No for each brand in groups selected

- Print or On screen for each brand selected

The readership section also establishes whether the participant has looked at websites or apps where there is no equivalent printed magazine, or the printed magazine does not have the same name as the website or app.

Given that the objective of PAMCo is to provide estimates for readership in print and on screen, the frequency of looking at the publication on-screen is asked first (if the brand has been claimed as looked at on screen in the past 12 months), before moving on to ask about when the publication was last read in print and then how often it is read in print. There is evidence from NRS (the predecessor to PAMCo) that some claims for print readership are in fact for on-screen readership, so by asking about on-screen readership before print readership we are aiming to minimise incorrect claims.

If both magazines and newspapers have been claimed as read in the past 12 months, magazines are asked about first before asking about newspapers.

<u>Magazines</u>
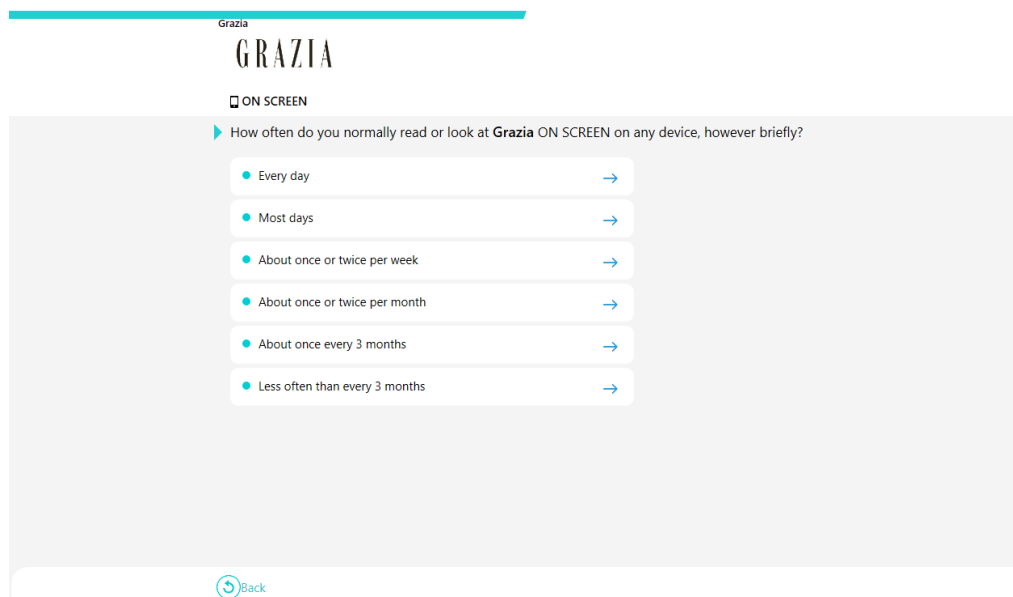
The recency ('when last') and frequency ('how often') questions are prompted on a brand-by-brand basis in the example sequence shown below for the fortnightly magazine Grazia.

Grazia - On Screen (how often)
Grazia - In Print (when last)
Grazia – In Print (how often)

On Screen (how often):

In Print (when last):

Grazia

GRAZIA

▤ FORTNIGHTLY IN PRINT

▶ When did you last read or look at any copy of **Grazia** IN PRINT apart from today, however briefly?

● Yesterday	→
● Past 7 days	→
● Past 2 weeks	→
● Past 4 weeks	→
● Past 3 months	→
● Longer ago	→

↺ Back

In Print (how often):

Grazia

GRAZIA

▤ FORTNIGHTLY IN PRINT

▶ How often do you normally read or look at **Grazia** IN PRINT, however briefly?

● Almost Always (3 or 4 copies out of 4)	→
● Quite often (2 copies out of 4)	→
● Occasionally (1 copy out of 4)	→
● Less often	→

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Newspapers

For newspapers the different issues or editions of a newspaper are prompted consecutively, with the supplement and in-paper sections prompted for each edition. An example of the sequence for a participant who claims to have read both the weekday, Saturday and Sunday editions of The Times newspaper in the past 12 months, and The Times on screen, is shown below.

The Times – On screen (how often)
The Times (Monday-Friday) – In Print (when last)
The Times (Monday-Friday) – In print (how often)
The Times (Saturday) – In Print (when last)
The Times (Saturday) – In Print (how often)
The Times (Saturday supplements) – when last
The Times (Saturday in-paper sections) – when last
The Sunday Times – In Print (when last)
The Sunday Times – In Print (how often)
The Sunday Times (Sunday supplements) – when last
The Sunday Times (Sunday in-paper sections) – when last

The Monday-Friday 'when last' question offers answers from 'Yesterday' to 'Not in the past 12 months' as shown in the images below:
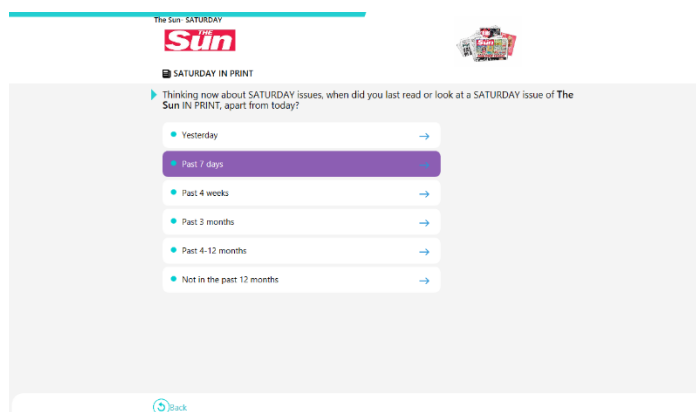
Throughout the readership questions the words ON SCREEN and IN PRINT are emphasised to help the participant consider the different platforms separately. The wording for the different newspaper issues (Monday-Friday/Saturday/Sunday) are emphasised for the same reason.

As well as asking about readership of printed newspaper supplements i.e. stand-alone magazines or other separate sections that come with a newspaper, in-paper sections for some newspapers are also prompted i.e. sections that are part of the main newspaper itself. An example screenshot is shown here:
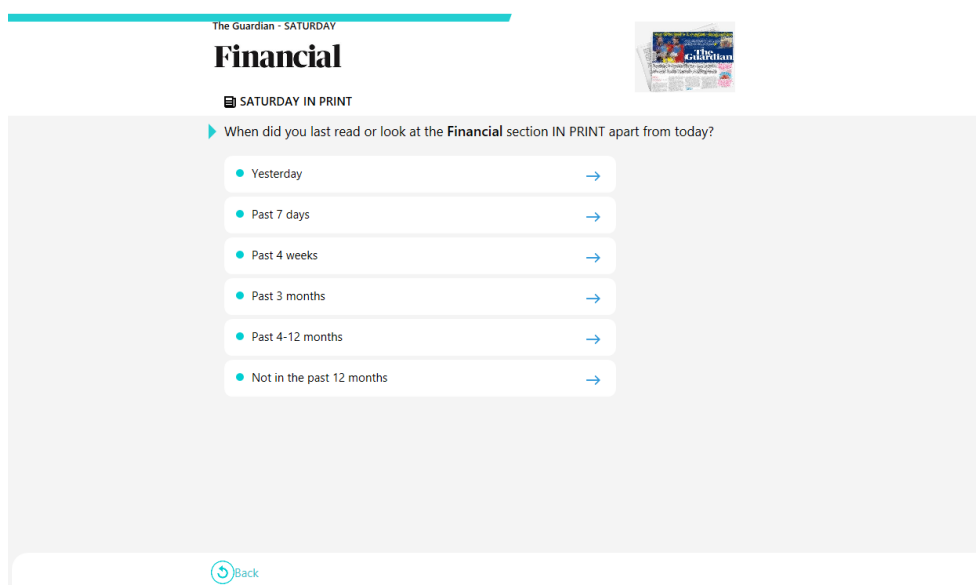
Local Weekly Newspapers

If the sample point is in a postcode where local weekly newspapers are measured, questions are asked in the interview about print readership in the past 12 months, 'when last read' and how 'often read' for these local weekly papers. These data are not published by PAMCo but are supplied to JICREG as an input for their modelling procedures.

Engagement questions

There are 3 different engagement questions in the interview which are:

- Source of Copy
- Time Spent Reading
- Attitude Statements

Source of Copy
A source of copy question is asked following completion of the recency and frequency questions for all titles and is asked for print average issue readers only.

Participants are asked "Thinking of the last copy of [brand] you read or looked at IN PRINT, whose copy was it?", and given a list of precoded statements to respond with:

> My copy
> Someone else in my household's copy
> Someone from outside of my household's copy
> Work or office copy
> Copy seen elsewhere

The participant is then asked follow-up questions which vary depending on the publication's distribution method (paid/free, paid only and free only).

The questions are as follows:

Was this copy of [brand]…?

> Paid
> Free
> Don't Know

(For paid titles) – How was the last copy obtained?

Bought at newsagent or shop
Delivered by newsagent
Delivered with online shopping
Subscription delivered to home (newspapers only)
I/someone else in my household subscribe to it (magazines only)
Picked up on bus, train or tube
Picked up on a plane or at airport
Picked up in a shop
Other
Don't Know

(For free titles) – How was the copy obtained?

On street or at a station
Picked up on a bus, train or tube
Picked up in a shop
At a recreation outlet (gym, club, etc.)
At a student campus
Other
Don't Know

Time Spent Reading

A 'time spent reading' question is asked after the source of copy question for print average issue readers only. Participants are shown a list of precoded options and asked *"Roughly how long do you usually spend in total with a [DAY OF THE WEEK] issue of [Brand], including all the times you look at it and all the parts and supplements?*

The participant's answer is coded into one of the following codes:

> Less than 5 minutes
> About 5 minutes
> About 10 minutes
> About 20 minutes
> About 30 minutes
> About 45 minutes
> About 1 hour
> About 2 hours
> About 3 hours or longer

For daily newspapers, time spent reading is recorded separately for the weekday and Saturday issues, with an instruction to include readership of all the sections of the newspaper.

Time spent reading is asked for daily newspapers first, followed by weekday only, Saturday only, Sunday newspapers and then magazines.

Attitude Statements

If a magazine has AIR in print or digital frequency of at least once a month, participants are asked to react to four statements about their readership of that magazine brand.

Participants are asked the question, "How much do you agree or disagree with the following statements?" and given the below statements to respond to:

Reading or looking at it is time well spent
Its advertising is relevant to me
It gives me something I can't get elsewhere
I trust what I see in it

Participants are given 5 response options: 'agree strongly', 'agree a little', 'neither agree nor disagree', 'disagree a little', and 'disagree a lot'.

Participants are asked to consider print and on screen exposure to the brand when responding.

For newspapers, the same 4 statements and 5-level agreement scale are prompted, but with reference to newspapers in general, rather than individual brands.

Media list rotations

The following table summarises the order of questions for newsbrands and magazine brands and the rotations applied in order to treat all brands as fairly as possible.

Question	Forward Rotation	Reverse Rotation
Q5C: Brands in Groups of six or five for national newspapers (any in past 12 months, whether print and/or on-screen). Random rotation of position of each brand on the screen.	Daily Newsbrands Regional Daily Newsbrands Magazines Sunday Newsbrands	Sunday Newsbrands Magazines (in reverse order) Daily Newsbrands Regional Daily Newsbrands
Q6A: Digital only (any in past 12 months)	Digital only brands	Digital only brands
Q5E: RPY of Individual brands seen in past 12 months, from groups selected at Q5C	The order selected at Q5C	The order selected at Q5C
Q6B: Digital only RPY of individual brands seen in past 12 months from groups selected at Q6A	Digital only brands	Digital only brands
Q5G: Platform (print/on-screen) for brands selected at RPY	Titles within publication types in the order selected at Q5G. Daily Newsbrands Regional Daily Newsbrands Sunday Newsbrands Magazines	Titles within publication types in the order selected at Q5G. Magazines Sunday Newsbrands Daily Newsbrands Regional Daily Newsbrands
Individual brand questions (recency and frequency), magazines followed by newsbrands for both rotations.	Magazines (in order selected at Q5G): Q7A/C: on-screen frequency Q8A: magazine print recency Q8B: magazine print frequency Newsbrands (in order selected at Q5G). When both a daily and a Sunday edition of the same brand are selected at Q5G (Platforms), the brand will appear in the order of whichever of its editions were prompted first at Q5G, while still	Magazines (in order selected at Q5G): Q7A/C: on-screen frequency Q8A: magazine print recency Q8B: magazine print frequency Newsbrands (in order selected at Q5G). When both a daily and a Sunday edition of the same brand are selected at Q5G (Platforms), the brand will appear in the order of whichever of its editions were prompted first at Q5G, while still

	maintaining the question order below	maintaining the question order below
	Q9A: On-screen frequency Q10C: Print recency (Mon-Fri) Q14: Print frequency (Mon-Fri) Q10E: Print recency (Sat) Q13: Print frequency (Sat) Q11A: Print recency (Saturday supplements) Q12A: Print recency (Saturday in-paper sections) Q15A: Print recency (Sun) Q18A: Print frequency (Sun) Q16A: Print recency (Sunday supplements) Q17A: Print recency (Sunday in-paper sections)	Q9A: On-screen frequency Q10C: Print recency (Mon-Fri) Q14: Print frequency (Mon-Fri) Q10E: Print recency (Sat) Q13: Print frequency (Sat) Q11A: Print recency (Saturday supplements) Q12A: Print recency (Saturday in-paper sections) Q15A: Print recency (Sun) Q18A: Print frequency (Sun) Q16A: Print recency (Sunday supplements) Q17A: Print recency (Sunday in-paper sections)
Q19B, Q19C: Local weekly newsbrands recency/frequency	Print title prompted by postcode on a sample point basis.	Print title prompted by postcode on a sample point basis.
Q7B Frequency/recency of digital only brands		
Engagement Questions – each question asked for all brands before moving to next question.	Q20A: Source of Copy (Print AIR) Q20F: Time Spent Reading (Print AIR) Q21A: Attitude Statements (Print AIR or digital at least once a month)	Q20A: Source of Copy (Print AIR) Q20F: Time Spent Reading (Print AIR) Q21A: Attitude Statements (Print AIR or digital at least once a month)
Q20A: Source of Copy (Print AIR). Titles within publication types in the order selected at recency and frequency questions. If AIR of both a daily and Sunday edition of a newsbrand have been selected, they appear consecutively.	Daily Newsbrands Sunday Newsbrands Magazines	Magazines Daily Newsbrands Sunday Newsbrands
Q20F: Time Spent Reading (Print AIR). Titles within publication types in the order prompted at Q20A Source of Copy.	Daily newsbrands (Mon-Fri/Sat) Daily newsbrands (Mon-Fri only) Daily newsbrands (Sat only) Sunday newsbrands Magazines	Magazines Daily newsbrands (Mon-Fri/Sat) Daily newsbrands (Mon-Fri only) Daily newsbrands (Sat only) Sunday newsbrands

Q21A: Attitude Statements (Print AIR or digital at least once a month). Titles within magazine types in the order prompted at Q5G Platforms. All newsbrands are considered together with generic response statement options.	Magazines: Print/Digital are prompted for each publication after Q20A and Q20F Digital only Newsbrands: after Q20C/Q20F and Q21A have been asked for each magazines, generic attitude statements are given, and participants asked to consider all newsbrands selected when responding	Magazines: Print/Digital are prompted for each publication after Q20A and Q20F Digital only Newsbrands: after Q20C/Q20F and Q21A have been asked for each magazines, generic attitude statements are given, and participants asked to consider all newsbrands selected when responding

SECTION 2 - Classification

This section covers the participants' household composition, identification of a Chief Income Earner, and demographic information.

The section begins with questions including those about the composition of the household, ages of the household members and of the respondent, marital status and gender.

The gender question in the script is as follows:
"Which of the following describes how you think of yourself?"
Male
Female
In another way
Prefer not to say

Next more detailed information about the participants' working status, and the occupations of the Chief Income Earner and participant (if different) are collected. The occupational details are required for social grading purposes.

The Chief Income Earner (CIE)

The Chief Income Earner (CIE) is determined by asking the following question:

"Who in your household would you say is the MAIN INCOME EARNER, that is the person with the largest income?"

The Chief Income Earner must be related to the participant. The Social Grade of unrelated people living in the same household is based on their own individual occupations. Couples living as married/co-habiting are treated as 'married' and therefore 'related' for classification purposes. Widows receiving maintenance, with no higher grade occupations, are graded on their late partner's occupation. If two or more people in the household have equal incomes, then social grade is coded for the older person.

Retired participant or Chief Income Earner

If the CIE is retired, additional questions are asked to help code social grade accurately.

There is a question on whether they have a private or company pension or not. Someone receiving a private pension, however small, is coded as having a private or company pension.

When talking about their occupation, if retired then they are asked about their main or highest earning occupation. If it has already been established that they have a private pension, then this is the occupation which they are classified on.

If the pension is from a late partner's occupation, then this is the occupation that is used for grading.

The interviewer confirms if the CIE has benefits only or also has another form of income. This other form of income may include, but is not restricted to, a company pension, a widow's pension, and monies from savings or investments. If the CIE is retired and has no other income apart from a State pension then the social grade is E.

If the CIE is retired and has any form of income over and above state benefits, the social grade is based on their former occupation.

The classification section concludes with questions on income (of participant and Chief Income Earner), education and household tenure.

Social Grade
Once all of the relevant details to enable social grading have been recorded by the interviewer, a summary of the information is shown on screen for the interviewer to code social grade. All social grade coding is checked once fieldwork has concluded by experienced coders at Ipsos MORI.

If the CIE is unemployed i.e. he/she doesn't have a paid job but is actively seeking, or is available for, employment at the time of interview, then the following rules are used for social grading purposes:

If, at the time of interview, the unemployed person is dependent on state benefit only, the social grade is based on their previous occupation if they have been unemployed for less than six months.

If the unemployed person who is dependent on state benefit only has been unemployed for over six months at the time of interview, their social grade will be E.

If the unemployed person has income exceeding state benefit level, the social grade will be based on their previous occupation regardless of the length of unemployment.

Demographics
The classification section concludes with questions about the informant relating to income, education, ethnicity, sexual orientation and disability.
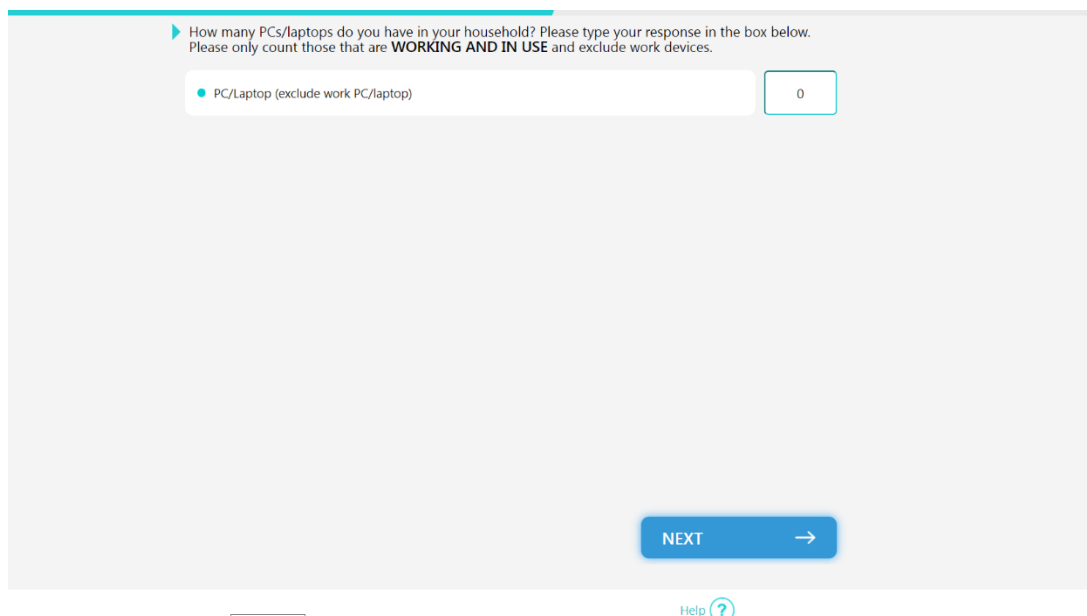
SECTION 3 - Shopping
This section covers the main shopper definition, spend on groceries, supermarkets and online shopping sites used and items browsed and purchased online in the last 12 months.

SECTION 4 - Internet devices owned and used
This section covers the different types of devices that can connect to the internet. The participant is asked, "How many of each of these types of [device] do you have in your household? Please only count those that are **WORKING AND IN USE** and exclude work devices." (an example of this

is included in a screenshot below), followed by questions about which of the devices selected the participant uses personally, and which of the selected devices are used most commonly.

This question structure is used 4 times, each for a different type of device

1: Smartphone

Apple iPhone
Android Phone
Other/Type not known

2: Tablet

Apple iPad
Android Tablet
Other/Type not known

3: PC (the type of PC is determined later, with a question asking participants to recall the type of PC they have used in the past 30 days, including the response options: Windows, Apple, Another type, or Don't know).

PC/Laptop

and 4: Digital devices

E-book
Smart watch
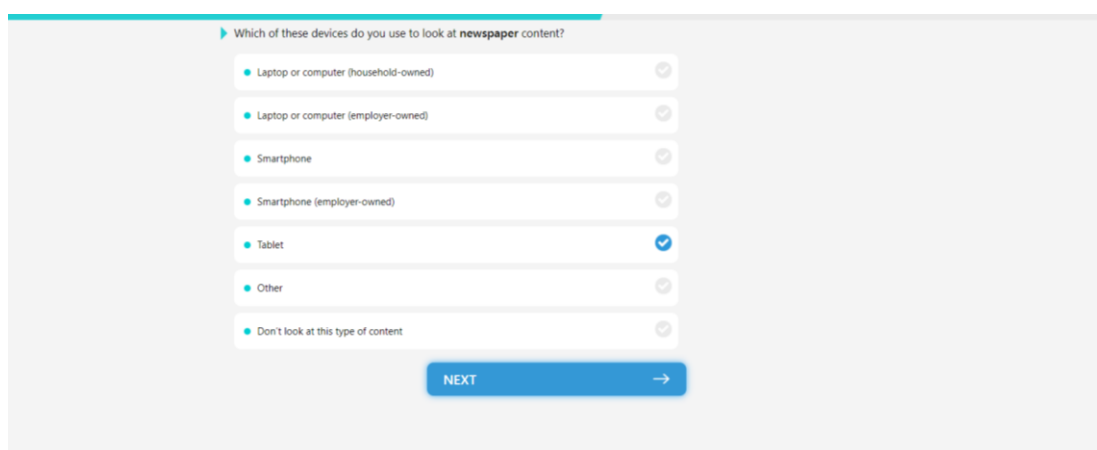Video game console
Smart TV
Blu Ray player

Streaming devices
An internet connected Set Top Box or DVR
Work devices are excluded at this question and are defined as devices that are owned by the employer for purposes of work. Separate questions ask about the ownership of work/education PCs and smartphones. If the participant is self-employed and/or owns their own computer, the computer should be classified as a household computer.

If there is a child aged 6-14 in the household, the participant is asked to answer about the device ownership and usage of a randomly selected child in the household within this age range.

Participants are asked to identify the recency of their use for each selected device (including those owned by places of work/education), which of the devices they use to read/look at published content via apps or the Internet, and the frequency of their use of each selected device for this purpose. An example of this type of question is included in the screenshot below.

SECTION 5 - **General Lifestyle**
There follows a lifestyle section covering participants' future plans (including financial) for the following 12 months, motoring, holidays/travel and commuting. Finally, there are questions about other media, covering cinema, radio and television.

WEIGHTING

For the 2021 data, the following rim weights were applied to the data.

a) Sex within 8 age groups (15-24 split into 15-17 and 18-24) at GB level
b) Sex within 7 age breaks within 7 survey regions (grouped GOR)
c) Sex within 60 weighting areas, with some collapsing of weighting areas to avoid large weights
d) ACORN sampling band within London GOR vs rest of GB
e) Household Size (with targets derived from BARB Establishment Survey)
f) Terminal Education Age (with targets derived from historic PAMCo data)

The sample was grossed to JICPOPS mid 2021 estimates (2011 census based), a total of 53,927,883.

The rim weighting efficiency and highest/lowest weights are shown below.

	Q1/Q2 2021	Q3 2021	Q4 2021
Rim weighting efficiency	74.0%	73.2%	74.2%
Highest weight	6.474	9.151	7.079
Lowest weight	0.165	0.160	0.145

The chart below illustrates the distribution of weights in the three reporting periods of 2021.

Range of Weights:2021
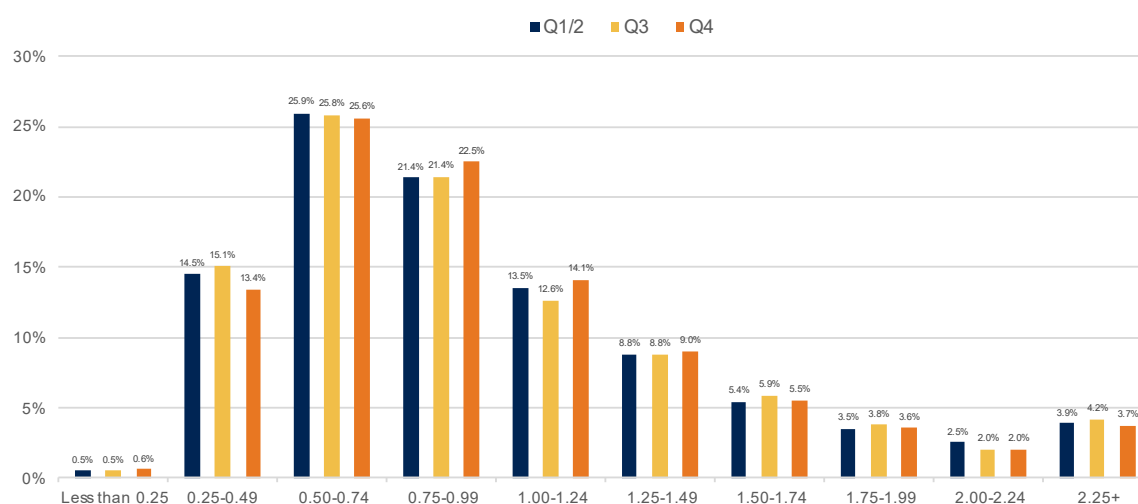
MODELLING AND ANALYSIS

Modelling Procedure for Daily Newspapers
A modelling procedure was applied to data for daily newspapers.

The PAMCo data show results for three AIR measures as follows:

Monday-Friday average issue readership (weekday AIR)
Saturday issue readership (Saturday AIR)
Monday-Saturday average readership (6 day AIR)

Monday-Friday average issue readership (weekday AIR)
The PAMCo interview asks about Monday-Friday readership of daily newspapers and Monday-Friday AIR is captured directly from the interview data and not modelled.

Saturday issue readership (Saturday AIR)
These are obtained from a specific question on the readership of Saturday issues of national daily newspapers.

Monday-Saturday average readership (6 day AIR) and read past year (6 day RPY)
AIR targets are calculated from 1/6 of the Saturday ('Yesterday' or 'Past 7 days') and 5/6 of the Monday-Friday ('Yesterday') AIR.

6 day Monday-Saturday Read Past Year (RPY) readership needs to be calculated for reporting purposes and this is done by creating nets of the weekday and Saturday editions for both recency and frequency data.

When netting recency, the more recent of the Monday-Friday and Saturday intervals is chosen where a participant is a reader of both editions. For example, if a participant claimed last 7 days recency for the Monday-Friday edition and last 4 weeks for Saturday edition, then the participant is assigned the 'last 7 days' recency for the Monday-Saturday newspaper.

There is no obvious choice for how the frequency net should be calculated. However, considering that the Monday - Friday edition is 5 out of 6 issues of Monday-Saturday, it is logical that if a person is a reader of the Monday-Friday edition, the Monday-Friday is used, without regard to Saturday frequency. If a person is not a reader of the Monday-Friday edition, a frequency of "Occasionally" or "Less Often" is given ("Less Often" for every first and second occurrence and "Occasionally" for every third occurrence).

The AIR modelling procedure described above was applied to the AIR in Government Office Region Scotland separately from the AIR for the rest of Great Britain for 5 national daily newspapers. These are newspapers which have a different masthead for their Scottish editions: Daily Express, Daily Mail, Daily Star, The Sun and The Times.

Probabilities
PAMCo readership data are collected and processed in a binary format. Each participant is either a reader (1) or not a reader (0) of a publication. In order for PAMCo readership data to be used by the data bureaux in reach and frequency planning tools it is preferable that PAMCo binary data are converted to probabilities. Probabilities give each participant claiming to have read a

publication in the past year (RPY) a score of between 0 and 1 of being an Average Issue Reader (AIR) of the publication. Probabilities are derived using a CHAID segmentation technique which is based on demographic and other variables available from the interview data.

Probability of Reading for Newspaper Supplements and In-Paper Sections Print Data
In the PAMCo interview, there is no frequency data collected for newspaper supplements and in-paper sections, only recency data. To allow the calculation of cumulative readerships and of schedules, an alternative method of calculating probabilities has been derived.

All participants that claimed to read the supplement or in-paper section in the past 12 months are segmented according to their propensity to be average Issue readers of the supplement or section. Segmentation is conducted using CHAID. Once segmentations are complete, the terminal nodes of the segmentation are split according to frequency of reading. As there are no frequency data for the supplements and sections, the frequency of reading the parent newspaper is used as a proxy, and an AIR probability is calculated for each frequency node.

Each participant has, for each supplement or section, an individual 5-digit probability code ranging from 0 to 1 e.g. 0.4828. These probabilities do not correspond to the standard frequency codes of other publications.

Summary codes of the probabilities are provided and are defined as follows:

High	0.6667-1.0000
Medium	0.3334-0.6666
Low	0.0001-0.3333

24 Month Base Procedure
The 24 month base procedure allows smaller titles to have PAMCo published estimates. The procedure is applied to titles falling below the annual threshold of 100 unweighted average issue readers (AIR) required for publication of estimates, but achieving an unweighted AIR of 100 or more over a 24 month period.

The procedure combines data from 24 continuous months of data, including the current quarter, to calculate the combined penetration of each of the recent reading and frequency of reading claims in the total population. Readership targets based on the most recent 24 months are then overlaid on the most recent 12 months of data, with any adjustments necessary made to the most recent quarter. This may have the effect of adjusting read past year (RPY) as well as AIR.

A summary of the procedure for adjustment is as follows:

1) On an annual basis, identify and specify publications that qualify for this procedure.
2) Combine audiences for the most recent quarter and the preceding 7 quarters (21 months) of data.
3) Calculate new AIR and RPY targets from the combined population penetrations for frequency and recent reading.
4) Adjust weighted data for the current quarter, according to the targets. Randomly select participants to add from the 'non-reader' population, or to remove from the reading population. Selection is based on a target demographic profile, created from the combined quarters' data.

Titles published on a 24 month base have the symbol 24M in the bureaux systems and in certain PAMCo data tables.

Publications with Frequency Changes
The published readership estimates for titles that change their publication frequency are calculated in the following way:

The average issue readership comprising qualifying recency codes from the new frequency are added to the average issue readership comprising qualifying recency codes from the old frequency.

Publications that have changed their publication frequencies are given the publication symbol F in certain PAMCo data tables to denote that the estimates are calculated using data collected from more than one publication frequency.

Adjustment for Circulation Loss
In addition to the demographic weighting, results are adjusted for the effects of circulation loss where there has been interruption of normal publication. The adjustment procedure involves changing the codes of some participants from 'non-reader' to 'reader' for a relevant title.

Estimates of circulation loss are based on data reported to the NMA or PPA by each publisher together with ABC information concerning National Newspapers. Non-members of the NMA and PPA report directly to Ipsos MORI.

Adjustments made for missing data in the paper questionnaire
The paper questionnaire is unable to accommodate the complex filtering that is an essential aspect of the online survey. In particular, it does not include the following data:

- Sections and supplements – no data is collected for these
- Digital frequency – only 'at least monthly' and 'less often' are collected, rather than the full frequency scale
- Fortnightly and bi-monthly titles – 'past 2 weeks' and 'past 2 months' codes are not included
- Source of copy and time spent reading are only asked at category level (weekly magazine, monthly magazine, weekday newspaper, Saturday newspaper, Sunday newspaper)
- Attitudes to magazines are only asked about magazines in general

Each of these elements requires some modelling as described below:

Sections and Supplements
In the 2021 data, the relationship between the main newspaper and its sections and supplements in the online/CAPI data has been used to model the readership of the sections in the paper data.

For each point on the recency scale that falls within the filter for sections and supplements (past 3 months), a propensity to have read each section or supplement at each point on its recency scale (up to past 12 months) is calculated, and gender is also taken into account.
For example, if 30% of males with past 7 day reading of the main paper have read Section X in the past 7 days in the online/CAPI data, that propensity will be applied to the males who have read the main paper in the past 7 days in the paper data, to create a target audience.

The same will apply at each point in the recency scale to create a matrix of weighted targets (recency of main paper x recency of section or supplement) for each of males and females.

Paper records within the required gender and recency cell for the main paper will be randomly selected to meet the target audience and the model will iterate multiple times in order to schieve the best match with the calculated target audience.

Digital Frequency

The code 'At least once a month' for digital frequency in the paper questionnaire is converted into a more detailed frequency with reference to the data from the questions *'How often do you look at newspaper / magazine content on each of the following devices?'* (separate question for newspapers vs magazines).

The scale in this generic question matches the digital frequency scale in the online/CAPI data so that it is straightforward to assign a digital frequency to each brand for which there is a code 'at least once a month' in the paper questionnaire.

If there is no code within the 'at least once a month' bracket in the generic data for that category, the code 'about once a month' is assigned, but if the generic question indicates 'about once a week', for example, that frequency will be assigned to each brand within the category (newspapers or magazines) where 'at least once a moth' has been coded.

Fortnightly and Bi-monthly titles

In the paper questionnaire the use of a standard recency grid for all magazines does not make it practical to include 'Past 2 weeks' or 'Past 2 months' on the recency scale. This is to the disadvantage of the PAMCo titles that have a fortnightly or bi-monthly publication interval, as there is a risk that average issue readers may under-state their recency by opting for the code that is less recent rather than more recent than the publication interval.

In order to correct this effect, we look at the frequency x recency matric for these titles in the online/CAPI data and use the propensities we see there to create targets for the paper data.

For example, if in the online/CAPI data we see that 80% of the 'almost always' readers of Grazia have read the title within the publication interval (past 2 weeks), we will ensure that this relationship exists in the paper data and will set a target to make sure that this is the case. Paper records will then have their data changed as needed, with some records having their recency changed from 'Past 4 weeks' to 'Past 2 weeks' (or from 'Past 3 months' to 'Past 2 months' for bi-monthlies.

Source of Copy and Time Spent Reading

The paper questionnaire can only ask generic questions at category level (weekly magazine, monthly magazine, weekday newspaper, Saturday newspaper, Sunday newspaper) for these variables and the generic data is therefore ascribed at brand level for all titles with AIR that match that category.

Magazine Attitudes

Magazine attitudes are asked only generically in the paper questionnaire and the responses are ascribed at brand level for all magazine titles that have AIR in print and/or digital frequency 'at least once a month', to match the online/CAPI filter.

Adjustments made for missing social grade

Just over 10% of the 2021 sample had insufficient information for the office coders to be able to assign an accurate social grade. A predictive (CHAID) model was therefore developed to estimate social grade in these cases, and did so with reference to the following variables:

- Income of Chief Income Earner
- Working status of CIE
- NS-SEC flag (an indication in the sample of the incidence of professional and managerial occupations in that small area)
- Terminal Education Age of CIE
- Household Tenure
- ACORN Sampling Band
- Whether retired people have a private pension
- If CIE is the informant, highest qualification obtained

The accuracy of the model can be measured in terms of the closeness of the match between predicted and actual social grade for those records whose social grade was not missing. The table below indicates what proportion of those who were coded as each social grade were assigned the same social grade through prediction based on other variables. This shows that the model is best at predicting Es correctly. It also predicts 60% of C1s correctly but we can see that Bs and C2s both have a much higher likelihood to be predicted as C1s than the correct social grade and this indicates a general tendency to over-predict C1, which we should bear in mind when considering the predictions for the 10% of the sample whose prediction constitutes their final social grade in the dataset. The poor match for As and the fact that over half of A's are actually predicted as Bs demonstrates the difficulty of distinguishing between As and Bs and may be contributing to an under-representation of As in the final profile. Whilst the prediction generally matches the correct half of the ABC1 vs C2DE divide, nearly three quarters of C2s are assigned to a white collar social grade.

Predicted Social Grade	Coded Social Grade					
	A	**B**	**C1**	**C2**	**D**	**E**
	290	1810	2058	1066	631	453
A	14.8%	16.9%	5.0%	0.7%	0.5%	0.4%
B	52.4%	17.7%	17.7%	10.5%	4.9%	4.4%
C1	31.4%	60.2%	60.2%	63.7%	40.7%	16.8%
C2	0.7%	9.9%	9.9%	15.7%	28.7%	4.9%
D	0.7%	3.4%	3.4%	8.3%	20.1%	7.5%
E	0.0%	3.7%	3.7%	1.2%	5.1%	66.0%

The table below shows the social grade profile in Q4 2021, before and after the ascription.

	Coded	Ascribed	TOTAL
Base	*6,308*	*750*	*7,058*
A	4.6%	1.7%	4.3%
B	28.7%	24.1%	28.2%
C1	32.6%	51.2%	34.6%
C2	16.9%	10.0%	16.2%
D	10.0%	2.9%	9.2%
E	7.2%	10.0%	7.5%

DATA INTEGRATION

A new fusion is carried out for each quarterly data release using a respondent level file from a single month of the Ipsos iris industry-approved digital audience estimates.

The Ipsos iris month for each PAMCo release of 2021 is as follows:

PAMCo Bridge 3 2021 – July 2021
PAMCo Bridge 4 2021 – September 2021
PAMCo Bridge 2 2022 – November 2021

The following describes the fusion for the PAMCo Bridge 1 2022 release, for the data period January 2020 - December 2021. The data inputs are as follows:

- **PAMCo Print Survey:** January 2020 to December 2021 (n=41,769 of which 37,662 Internet users in past 30 days)
- **Ipsos iris monthly data:** November 2021 – a synthetic dataset consisting of 950,373 unique ids, created from over 10,000 reporting panellists and a sample of devices taken from full census data.

1. Summary of Fusion Process

The fusion is a row-wise constrained fusion, in which the PAMCo survey sample are the donors and the Ipsos iris dataset the recipients.

The following process is followed in running the fusion:

1. Ipsos iris data preparation – Exclude ids from Northern Ireland and select digital entities required for PAMCo.
2. Match Ipsos iris entities to digital claims in PAMCo survey data
3. Transform other matching variables required format for distance / similarity calculation
4. Add Page Views to apps and parent brands
5. Run the Fusion to identify best matches from the PAMCo dataset for each Ipsos iris id
6. Calibrate the survey data so that original weights are preserved

The survey data is entirely preserved through a calibration process, in which the digital dataset is then slightly distorted. Age and Gender and a grouping of Government Office Regions are critical cells for the fusion.

Table 1.1 – Critical cells that must be matched in the fusion process

Age Group	Government Office Region
15-24	North East / Yorks & Humber
25-34	South West / Wales
35-44	E. Midands / W. Midlands
45-54	South East / East
55-64	North West
65+	London
Gender	Scotland
Male	
Female	

Where demographic variables are present in both datasets, the information in the PAMCo survey dataset is used in the fused data.

Variables used for matching are:

- Claimed digital behaviour for individual brands
- Social Grade
- Working status
- Household Size
- Presence of Children
- Internet usage frequency
- Ethnicity

Universe definition

Both Ipsos iris and PAMCo universes are defined as internet users of computers, smartphones or tablets in the last 30 days.

Table 1.2 lists the Ipsos iris internet using population by gender and age for November 2021 compared to the PAMCo internet user population for January 2020 to December 2021.

The Ipsos iris population includes Northern Ireland while the PAMCo universe is GB only. Aside from this difference, although Ipsos iris uses PAMCo data to weight its universes, a more recent period of PAMCo data (September 2020-mid May 2021) has been used to define the iris universe in November 2021. The most significant differences between the two are for older females aged 65+ and males aged 45-54, differences that will diminish over time as pre-Covid data works its way out of the PAMCo dataset.

Table 1.2 – Universe Comparison PAMCo Vs. Ipsos iris

	Ipsos iris NOV '21 (000s)	PAMCo BRIDGE 1 2022 (000s)		PAMCo BRIDGE 1 vs iris NOV '21
TOTAL	48489	48177		0.994
Males 15-24	3723	3756		1.009
Males 25-34	4274	4292		1.004
Males 35-44	3925	3989		1.016
Males 45-54	4185	4009		0.958
Males 55-64	3695	3697		1.001
Males 65+	4269	4222		0.989
Females 15-24	3606	3613		1.002
Females 25-34	4159	4180		1.005
Females 35-44	3961	4034		1.018
Females 45-54	4263	4132		0.969
Females 55-64	3814	3849		1.009
Females 65+	4615	4408		0.955

The final PAMCo Bridge 1 2022 dataset contains 954,480 records, with every Ipsos iris id and every non internet user from the PAMCo survey used once.

The 37,662 PAMCo survey internet users were used an average of 25.2 times each, with the following distribution.

Number of times used		Number of times used	
1-5	9.6%	26-30	8.0%
6-10	15.4%	31-50	17.1%
11-15	15.8%	51-75	6.9%
16-20	13.2%	76-100	2.1%
21-25	10.3%	101+	1.5%

2.   **Quality control**

The fusion can be evaluated according to the following criteria:

- PAMCo survey results should be preserved exactly at all levels.
- The results from Ipsos iris should be distorted as little as possible (with target of +/- 5% at total digital level for monthly reach)
- Duplications between print and digital audiences should demonstrate higher propensity to see the brand on screen among print readers than non-readers in print.

2.1   Matching PAMCo Print Currency

Detailed checks of the fusion outputs verify that the Print readership data is completely preserved in the fusion process.

2.2   Matching Ipsos iris digital Currency

In Table 2.2, the number of entities with audiences of 50,000+ falling within +/-3% and +/-5% of the Ipsos iris target for total monthly digital audience is shown by category.

Table 2.2 – Difference between fused and Ipsos iris currency for monthly reach by category - for all entities with an audience of 50,000+

Category	PAMCo Entities	No. within range +/- 3.0%	No. within range +/- 3.0-5.0%	No. outside of range +/- 5.0%	%. outside of range +/- 5.0%
Magazine websites	69	18	34	17	24.6%
Magazine apps	1	1	0	0	0.0%
Magazine distributed content	25	14	8	3	12.0%
Magazine total brands	66	21	34	11	16.7%
Newsbrand websites	30	19	8	3	10.0%
Newsbrand sections	236	90	110	36	15.3%
Newsbrand apps	14	13	0	1	7.1%
Newsbrand distributed content	9	0	8	1	11.1%
Newsbrand total brands	13	10	3	0	0.0%
Non-publishers	337	300	35	2	0.6%
Total	**800**	**486**	**240**	**74**	**9.3%**

Table 2.3 – Entities (with audience 50,000+) with largest difference between fused and target audience by category

Category	Largest positive difference			Largest negative difference		
	Name	Ipsos iris Audience ('000)	% diff	Name	Ipsos iris Audience ('000)	% diff
Magazine websites	houseandgarden.co.uk	293	+9.1%	elledecor.com	58	-1.8%
Magazine distributed content	Hello! Magazine	2695	+4.0%	Good to Know	83	-6.2%
Magazine total brands	My Weekly	105	+8.8%	N/A		
Newsbrand websites	driving.co.uk	96	+6.0%	mailshop.co.uk	145	-3.7%
Newsbrand sections	iNews.co.uk - Lifestyle - Food and Drinks	67	+9.6%	Metro.co.uk - Sport - Tennis	67	-3.7%
Newsbrand apps	Times Radio	69	+5.5%	The Mirror	145	-2.8%
Newsbrand distributed content	The Times	5932	+5.3%	N/A		
Newsbrand total brands	iNews	8056	+3.9%	N/A		
Non-publishers	Complex	216	+6.1%	Diply	159	-5.3%

Table 2.4 summarises the % of published entities that fall within the ranges +/-3% and +/-5% in total and by platform for monthly reach. In this analysis, all PAMCo entities are included, regardless of audience size.

Table 2.4 – Matching to Ipsos iris estimates by platform

	% of published entities within +/-3%	% of published entities within +/-5%
Monthly reach – TOTAL	57.6%	86.9%
Monthly reach – PC	53.5%	79.0%
Monthly reach – phone	50.7%	80.8%
Monthly reach – tablet	62.7%	79.3%

3. Duplication between print and digital

The duplications between print and digital are the product of the fusion, with no additional calibration or smoothing.

For newsbrands, print readers are 1.5 times more likely on average to see the brand on screen than those who do not read it in print.

Table 3.1 – Duplications for newsbrands – Monthly Reach

Newsbrand	% of print readers with digital	% of non print readers with digital	Ratio Print Readers vs non-readers
The Telegraph	37.8%	26.1%	1.45
The Times	37.6%	23.9%	1.58
The Guardian	55.7%	32.4%	1.72
i	27.8%	15.2%	1.82
Express	36.3%	32.5%	1.12
Mail	43.2%	41.3%	1.05
Mirror	45.7%	45.6%	1.00
Daily Record	38.3%	14.6%	2.62
Daily Star	30.7%	22.6%	1.36
Sun	47.8%	47.0%	1.02
Evening Standard	30.2%	17.1%	1.76
Metro	33.4%	28.2%	1.18

For magazine brands, the average ratio between print readers and non-readers is much higher at 5.9, with a distribution as shown in Table 3.2 below.

Table 3.2 – Duplications for magazines – Monthly Reach

Ratio between print readers and non-readers for likelihood to see same brand on screen	
<1	7.6%
1-1.99	19.7%
2-2.99	21.2%
3-3.99	12.1%
4-4.99	16.7%
5-5.99	7.6%
6-9.99	6.1%
10+	9.1%