



# Communications Market Report 2016

Research Document

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# About this document

The report contains statistics and analysis of the UK communications sector. It is a reference for industry, stakeholders, academics and consumers. It provides context to the work Ofcom undertakes in furthering the interests of consumers and citizens in the markets we regulate.

The report contains data and analysis on broadcast television and radio, fixed and mobile telephony, internet take-up and consumption and post.

We publish this report to support Ofcom's regulatory goal to research markets constantly and to remain at the forefront of technological understanding. It also fulfils the requirements on Ofcom under Section 358 of the Communications Act 2003 to publish an annual factual and statistical report. It also addresses the requirement to undertake and make public our consumer research (as set out in Sections 14 and 15 of the same Act).

Much of the data included in this report is available for anyone to access, use and share on the open data pages of Ofcom's website: [www.ofcom.org.uk/opendata](http://www.ofcom.org.uk/opendata)



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# Introduction

The availability of technologies and services that offer faster and more reliable internet connections has continued to grow this year. 4G mobile services are now available to 97.8% of UK premises, and superfast broadband is available to more than eight in ten households. Consumers are increasingly embracing these services. 4G take-up has increased to 48% of UK adults and 37% of fixed broadband connections are providing actual speeds of 30Mbit/s.

The greater choice of where and how to access the internet is driving greater use of online services. The smartphone in particular has become an ever more important device for many consumers, and take-up of this device has increased again this year. Seventy-one per cent of all adults now own a smartphone, up from 66% in 2015.

More traditional means of communication are being substituted for over-the-top services. The amount of time people spend texting and emailing has fallen, while the proportion of people who use instant messaging services, VoIP and video calling has increased.

Over-the-top services are also being used for audio-visual and audio content. Viewing to live TV has fallen, while use of on-demand services has grown. The use of traditional broadcast media is still high among all adults, but there are some clear differences in use by age. While 63% of all adults' viewing time is spent with live TV, this ranges between 36% for the 16-24s to 83% for the over-65s. There is a similar pattern for listening time; 16-24s spend 29% of their listening time with live radio, compared to 71% for all adults.

The changing way in which younger people are engaging with content is affecting the way that they interact with media and communications activity overall. This age group is now watching less live TV and more on-demand content, so their attention is focused on the specific content that they have chosen to watch, rather than on texting and web browsing at the same time as watching live TV.

The increased use of on-demand and online services has also led to an increase in demand for data. The average fixed broadband line used 41% more data each month in June 2015 than in the same month the previous year.

This year's Communications Market Report analyses and examines these, and other, trends. It presents selected findings from some of our regular consumer tracking surveys, information collected directly from industry, analysis of data from the audience measurement systems for TV, radio and online use, as well as the findings of bespoke Ofcom research. This research includes an update of our 2014 *Digital Day* diary study, looking into how people in the UK are using media and communication services and devices throughout the day, and research into how people feel about, and how they are dealing with, the enhanced connectivity offered by new services and devices.

## Methodological note

A variety of data sources were used in compiling this report: Ofcom's technology tracker survey, its residential consumer postal tracking survey, its business postal tracking survey and its media tracking survey, as well as a range of ad-hoc research. The following is a brief outline of the tracking surveys used, any methodological changes and an explanation of the significance testing.

### **Ofcom Technology Tracker**

The technology tracker survey is run twice a year. It provides Ofcom with continuous understanding of consumer behaviour in the UK communications markets, helping us to monitor change and assess the degree and success of competition. The data collected is weighted to the profile of UK adults, so the data are representative of adults aged 16+. The weighting profile was updated from 2015 to reflect updated Census and NRS data.

### **Ofcom Residential Postal Tracker**

The residential postal tracker survey is run throughout the course of the year and reported on a quarterly basis. The main objective is to help Ofcom to keep abreast of the UK postal market and to help us to quickly identify and react to any changes in attitudes and behaviour among residential postal consumers.

### **Ofcom Business Postal Tracker**

The business postal tracker survey is run throughout the course of the year on a sample of 1600 SMEs (businesses with 0-249 employees) and reported annually. The main objective is to help Ofcom to keep abreast of the UK postal market and to help us to quickly identify and react to any changes in attitudes and behaviours among SME postal consumers.

### **Ofcom Media Tracker**

The media tracker survey is run throughout the course of the year to counter potential seasonality issues, and is reported on an annual basis. The research provides Ofcom with a valuable source of information on consumers' attitudes, and helps inform Ofcom's work on broadcasting standards.

### **Significance testing**

In statistics, a 'significant' result is one that is unlikely to have occurred by chance. All of the differences (e.g. year on year) that are commented on in the text of this report will be significantly different to one another. Where percentages are described as being the same or similar, despite there being a difference in number, this is because the difference is not statistically significant. Ofcom conducts all significance testing to a 95% confidence level, which means that we are 95% certain that there has been a 'real' change and that the difference has not occurred by chance. Significance is tested using the effective sample size, where available, and the unweighted base, where not.



# The Communications Market 2016

## 1 Market in context

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# 1.1 Market in context

## 1.1.1 Overview

This introductory chapter of the Communications Market Report 2016 looks at the sectors Ofcom regulates as a whole.

It starts by looking at communications sector revenues (telecoms, TV, radio and post), and average monthly household spend on these sectors and services over the past five years, followed by take-up and availability of communications services and devices.

Following on from this, we present the findings of two pieces of market research that seek to understand consumer behaviour in relation to the time we spend on media and communications activities. **Digital Day 2016** studies adults' total media time on a minute-by-minute-basis to provide a broad overview of people's media activity, with some consumers spending more time on media and communications each day than they do sleeping. The amount of time spent on media and communications (8h 45m) has remained stable since the diary was last run in 2014, but this does mask some generational shifts, and changes in the types of activities we are undertaking and the devices we are using, including an increase in use of instant messaging and paid on-demand services among those aged 16-24.

Building on this overview of media activity, our **Coping in a Connected World** research seeks to better understand the impact – both positive and negative - of the possibility of constant connectivity on people's lives. It looks at people's perceptions of their use of the internet, their attitudes towards connectivity and whether people have a desire to switch off – to go on a 'digital detox'. With nine in ten adults reporting going online every day, being 'connected' is seen as a core part of many people's daily lives, with many respondents claiming to feel lost without it and admitting to being 'hooked' on their smartphones, tablets or other connected devices. The internet is highly valued for facilitating communications and preventing boredom, but time spent online does have its drawbacks. Four in ten internet users say they spend too much time online, and report negative effects on their work or personal lives, such as being late for work or missing out on sleep.

Finally, looking at the possibilities and challenges this connectivity provides to consumers, and the further technological developments always on the horizon, two sector experts from Ofcom provide their thoughts on the future use of, and demands on, **Spectrum** and **Technology**. David Mark Harrison, Ofcom's Head of Technology Strategy, writes a forward-looking piece considering three key themes: the greater coverage of fixed and mobile services, the capability of new technologies to deliver increased amounts of data, and how these will enable a wide range of new consumer services. Philip Marnick, Director of Spectrum Group, considers the competing demands for spectrum, and the next generation services that require spectrum, including 5G networks, the connected car, and smart grids.



## 1.2 Fast facts

Unless otherwise stated, figures are from Q1 2016

| <b>TV</b>   |                                 |
|---|---------------------------------|
| Proportion of UK homes with digital TV <sup>1</sup>   | 96%                             |
| Minutes spent watching broadcast TV per day (per person aged 4+, average daily minutes across 2015) | 3hrs 36mins                     |
| <b>Radio</b>  |                                 |
| Proportion of radio listeners with a DAB radio in their household                                   | 56%                             |
| Proportion of listener hours through a digital platform (DAB, online DTV)                           | 44%                             |
| Minutes spent listening to radio per day (among radio listeners)                                    | 3hrs 3mins (2015 <sup>2</sup> ) |
| Number of radio stations broadcasting on analogue (excluding community stations)                    | 337 (May 2016)                  |
| Number of community radio stations currently on air   | 239 (May 2016)                  |
| Number of UK-wide radio stations (analogue and DAB)   | 41 (May 2016)                   |
| <b>Internet</b>   |                                 |
| Total household internet take-up  | 86%                             |
| Number of fixed broadband connections   | 24.7 million (end 2015)         |
| Number of SFBB connections  | 9.2 million (end 2015)          |
| Proportion of adults with broadband (fixed and mobile)  | 81%                             |
| Superfast broadband take-up (% of all connections)  | 37% (Q4 2015)                   |
| Average actual fixed broadband speed  | 28.9 Mbit/s (Nov 2015)          |
| Proportion of homes with a tablet computer  | 59%                             |
| Proportion of people who use their mobile phone to access the internet                              | 66%                             |
| <b>Fixed and mobile telephony</b>   |                                 |
| Number of residential fixed landlines   | 25.6 million (end 2015)         |
| Number of fixed landlines in the UK, including ISDN channels  | 33.2 million (end 2015)         |
| Proportion of adults who personally own/use a mobile phone  | 93%                             |
| Proportion of adults with a smartphone  | 71%                             |
| Proportion of adults who live in a mobile-only home <sup>3</sup>                                    | 14%                             |
| Number of mobile subscriptions (including M2M)  | 91.5 million (end 2015)         |
| Number of 4G subscriptions  | 39.5 million (end 2015)         |
| <b>Post</b>   |                                 |
| Addressed letter mail volume in 2015  | 12.2 billion                    |
| Approximate no. items received by residential consumers per week                                    | 8.7 (2015)                      |
| Approximate no. items sent by residential consumers per month                                       | 6.6 (2015) <sup>4</sup>         |

<sup>1</sup> This figure is drawn from Ofcom's technology tracker. BARB's establishment survey measured TV take up at 95.4% of UK homes in Q4 2015 and this is set out in the TV section of this report.

<sup>2</sup> Average week in 2015

<sup>3</sup> A household that solely uses mobile phones to fulfil its voice telephony requirements.

<sup>4</sup> Yearly data for 2015 from Ofcom's Postal Tracker



# 1.3 Key market developments

## 1.3.1 UK communications market revenue

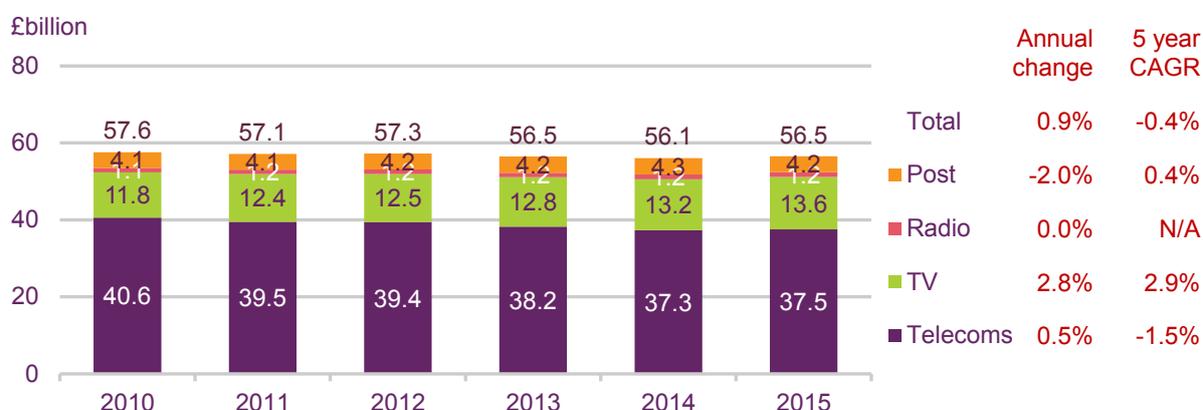
### Total UK communications revenues stood at £56.5bn in 2015

Total UK communications revenues generated by telecoms, TV, radio and postal services increased in 2015, rising by £0.4bn (0.9%) to £56.5bn. This overall increase was due in part to a rise in total telecoms revenue,<sup>5</sup> which increased by £0.2bn (0.5%) to £37.5bn during the year, countering the trend of falling revenues in this sector over the previous five years. This was mainly due to a £0.5bn increase in retail fixed revenue during the year, which was partially offset by falls in other areas of telecoms revenue. There was also a slight rise in the revenue generated by the UK broadcast television industry, up 2.8% to £13.6bn in 2015, driven by advertising and subscription revenues.

Addressed letter mail revenue decreased slightly to £4.2bn in 2015 (down by 2.0%), driven by declining volumes.

Total UK radio industry revenue remained stable year on year, at £1.2bn, as increases in national commercial revenue were offset by lower spending on radio content by the BBC.

**Figure 1.1 Communications industry revenue: telecoms, TV, radio, post**



Source: Ofcom/ operators.

Note: Includes licence fee allocation for radio and TV; figures are in nominal terms. Post is addressed letter mail. Changes in the way that revenue data are collected for the commercial radio sector means that data prior to 2014 are not comparable to data for 2014 and 2015.

## 1.3.2 Household spend on communications services

### Average monthly household spend on communication services has decreased in real terms over the past five years

Average monthly household spend on communication services has decreased in real terms over the past five years (i.e. adjusted for inflation) from £121.15 in 2010 to £118.90 in 2015, representing a monthly decrease of £2.25, or £27 per year.

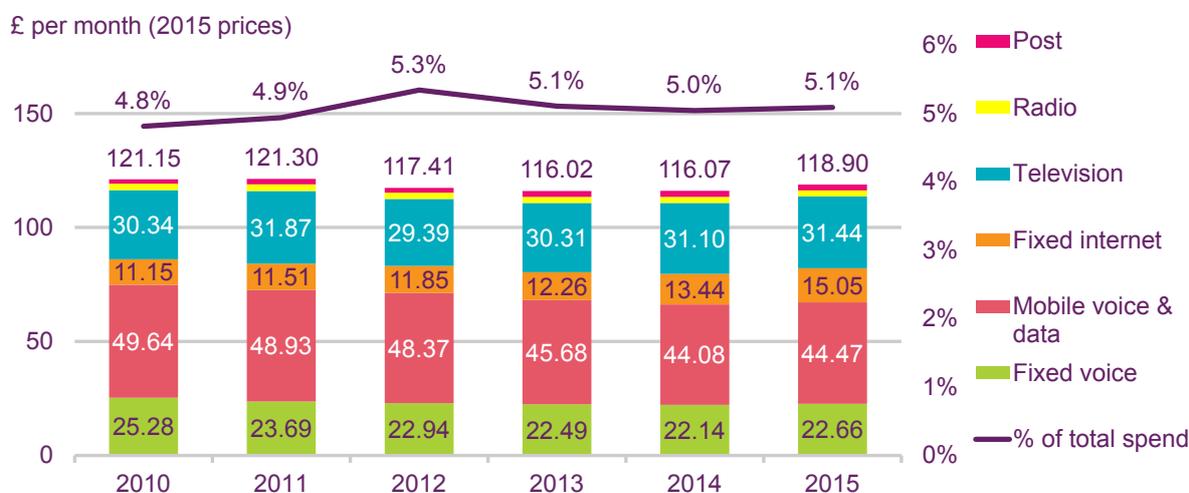
However, monthly household spend rose between 2014 and 2015, with telecoms spending rising £2.52 per month, driven by a 12% increase in fixed internet spending: from £13.44 to £15.05 in 2015. This is largely a result of consumers switching to superfast broadband

<sup>5</sup> Comprised of revenues from retail and wholesale fixed and mobile voice and data services.

services, which are generally around £10 more per month than standard broadband services, while line rental prices have also increased.

Household spend on traditional broadcast television increased by 34 pence per month, from £31.10 in 2014 to £31.44 a month in 2015, mainly driven by an increase in spend on traditional pay-TV subscriptions.

**Figure 1.2 Average household spend on communications services**



Source: Ofcom / operators / ONS

Notes: Adjusted for CPI; historic telecoms figures have been re-stated, so are not comparable to those published in previous reports. Television excludes spend on subscriptions, download-to-own and pay-per-view online TV services.

### 1.3.3 Availability and take-up of communications services

#### 4G outdoor mobile coverage nears that of 2G and 3G

As at May 2016, over 99% of UK premises had outdoor coverage for 2G and 3G mobile services from at least one operator. The outdoor coverage of 4G services, which are currently still being deployed by the UK's four national mobile network operators (MNOs), was only slightly lower, with 97.8% of premises having outdoor coverage from at least one 4G network.

Ninety-nine per cent of the UK was able to receive digital terrestrial TV in 2016, although the figure was marginally lower in Wales (98%) and Northern Ireland (97%). Availability of digital satellite television in the UK in 2014 stood at 98%, the same as in 2015.

For radio, the availability of national DAB services increased in 2016, with additional transmitters being added to the BBC's national DAB multiplex and the Digital One commercial DAB multiplex. The BBC's DAB broadcasts are now available to 97.2% of UK households, and Digital One (with digital only stations such as Kiss and Radio X and analogue simulcasts such as Classic FM) being available to 91.3% of UK households. In March this year, a new DAB multiplex launched – Sound Digital – carrying services including Talksport 2 and Virgin Radio. Coverage currently stands at 76.5% of UK premises, although it is lower in the nations, particularly Wales (51.5%) and Northern Ireland (56.6%).

Data on the availability of broadband networks, shown in the table below, are taken from last year's report; updates of these figures will be published later in 2016.

**Figure 1.3 Digital communications services: availability**

| Platform  | UK 2016 | UK 2015 | England | Scotland | Wales   | N Ireland |
|---|---------|---------|---------|----------|---------|-----------|
| Fixed line <sup>1</sup>                             | 99.9%   | 99.9%   | 100%    | 99.9%    | 100%    | 100%      |
| 2G mobile <sup>2</sup>                              | 99.6%   | N/A     | 99.7%   | 99.1%    | 98.4%   | 98.8%     |
| 3G mobile <sup>3</sup>                              | 99.6%   | N/A     | 99.8%   | 97.9%    | 98.6%   | 99.4%     |
| 4G mobile <sup>4</sup>                              | 97.8%   | N/A     | 98.8%   | 92.0%    | 90.1%   | 99.3%     |
| Digital satellite TV <sup>5</sup>                   | 98%     | 98%     | No data | No data  | No data | No data   |
| Digital terrestrial TV <sup>6</sup>                 | 99%     | 99%     | 99%     | 99%      | 98%     | 97%       |
| DAB BBC Network <sup>7</sup>                        | 97.2%   | 95.4%   | 98.2%   | 95.0%    | 92.2%   | 85.4%     |
| DAB commercial network (Digital One) <sup>8</sup>   | 91.3%   | 89.8%   | 94.6%   | 80.3%    | 67.4%   | 77.9%     |
| DAB commercial network (Sound Digital) <sup>9</sup> | 76.5%   | N/A     | 80.2%   | 64.4%    | 51.5%   | 56.6%     |
| LLU ADSL broadband <sup>10</sup>                    | -       | 95%     | 96%     | 89%      | 93%     | 89%       |
| Virgin Media cable broadband <sup>11</sup>          | -       | 44%     | 47%     | 36%      | 21%     | 27%       |
| BT Openreach/Kcom fibre broadband <sup>12</sup>     | -       | 82%     | 82%     | 75%      | 83%     | 92%       |
| NGA broadband <sup>13</sup>                         | -       | 90%     | 90%     | 85%      | 87%     | 95%       |
| Superfast broadband <sup>14</sup>                   | -       | 83%     | 84%     | 73%      | 79%     | 77%       |

Sources: Ofcom and operators:

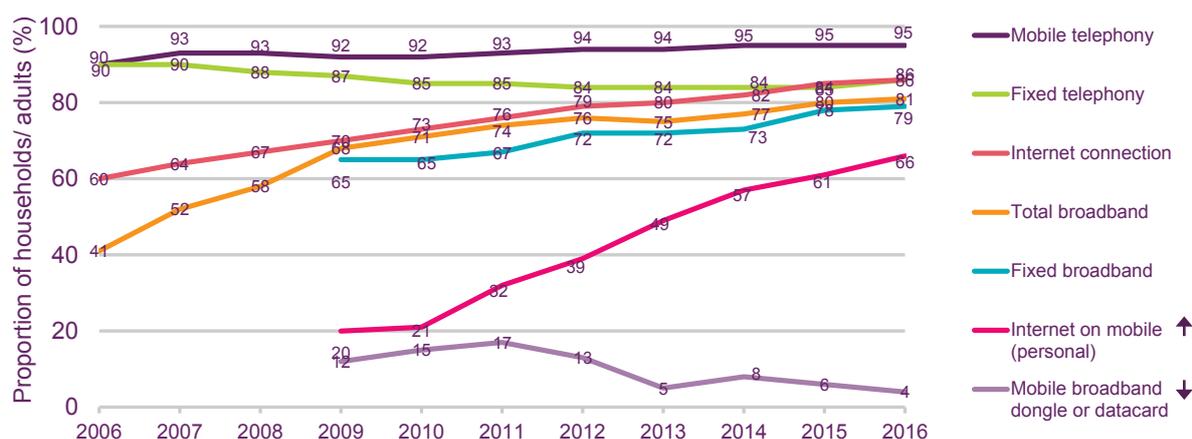
1. Fixed line availability as at December 2016. Stated to 1 d.p. (in previous years, quoted as a round number). 2. The signal strength thresholds used by Ofcom to determine where 2G, 3G and 4G mobile services are available differ from those used in last year's reports. As such, the mobile coverage data in this report are not comparable to those published last year. These thresholds may also differ from the ones used by MNOs in their reporting. Proportion of premises that have outdoor 2G mobile coverage from at least one operator, May 2016. 3. Proportion of premises that have outdoor 3G mobile coverage from at least one operator, May 2016. 4. Proportion of premises that have outdoor 4G mobile coverage from at least one operator, May 2016. 5. Relates only to the ability to achieve a necessary line of sight path to the satellite and does not include other factors that can affect coverage including: access in multi-dwelling units where it is not feasible to install a dedicated household satellite dish and there is no internal wired distribution system for satellite, and the need for planning permission in some locations. 6. Estimated proportion of homes that can receive the PSB channels via DTT (3PSB Mux coverage). DTT Frequency Planning Group (Arqiva, BBC, Ofcom); Relates to an assumption that consumers will install, if needed, a good quality terrestrial TV aerial at a height of 10m to achieve reception. 7. BBC National DAB network coverage as of June 2016 8. Digital One coverage as of June 2016 9. Sound Digital launched in March 2016 so no comparison to previous year available. Coverage as of June 2016. 10. Proportion of premises connected to an LLU-enabled BT local exchange area, December 2014. 11. Proportion of premises able to receive Virgin Media cable broadband services, May 2015. 12. Proportion of premises able to receive Openreach/Kcom fibre broadband services, May 2015. 13. Proportion of premises able to receive NGA broadband services, May 2015. 14. Proportion of premises able to receive superfast broadband services, May 2015.

## Two-thirds of adults now use their mobile to go online

The proportion of households with fixed telephony and mobile telephony remained relatively stable, at 86% and 95% respectively, in 2016. However, linked to the rise in smartphone take-up, there continued to be a steep increase in the proportion of adults going online on a mobile phone: two-thirds of those aged 16+ (66%) said they personally used their mobile phone to access the internet, up from 61% in 2015.

There continues to be a corresponding decline in the proportion of households that use mobile broadband via a dongle or built-in data card in a laptop or tablet – this now accounts for just 4% of households.

**Figure 1.4 Take-up of communications services**



Source: Ofcom Technology Tracker. Data from Q1 of each year 2007-2014, then H1 2015-2016.

Base: All adults aged 16+ (2016 n=3737).

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QC1: Is there a landline phone in your home that can be used to make and receive calls? QE1: Does your household have a PC or laptop computer? / QE2: Do you or does anyone in your household have access to the internet at home (via any device, e.g. PC, laptop, mobile phone etc.)? / QE9: Which of these methods does your household use to connect to the internet at home?

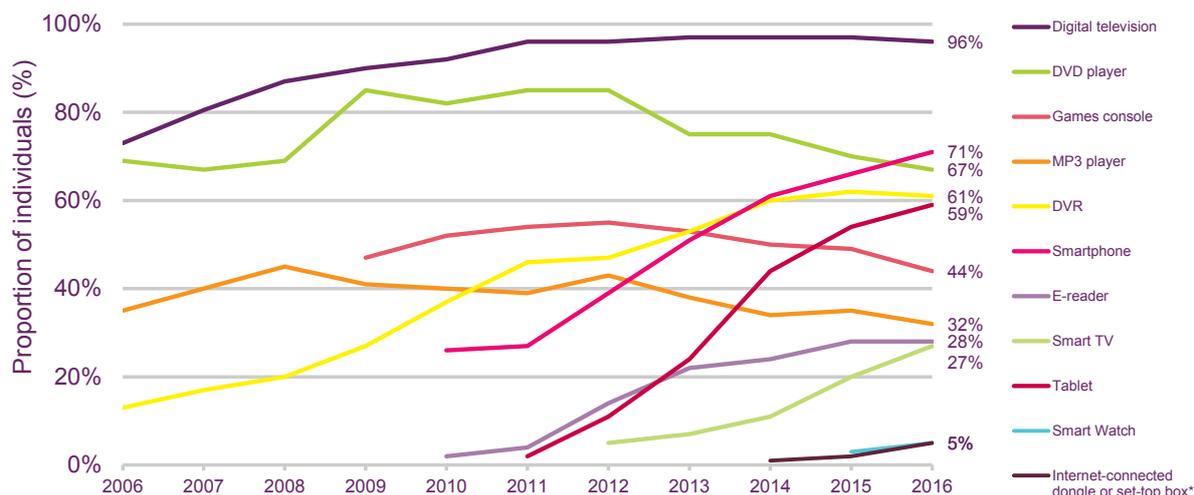
Note: Use of internet on mobile is personal take-up measure, whereas the other data relate to household take-up.

## Increase in take-up of tablets, smartphones and smart TVs continues, while games console ownership declines

Figure 1.5 shows take-up of a range of communications and audio-visual devices over the past ten years. Take-up of smartphones has continued to increase over the past year, with seven in ten adults (71%) now owning one. Six in ten households (59%) reported having at least one tablet computer (such as the Apple iPad or Samsung Galaxy Tab) in early 2016, a five percentage point increase on the previous year. Take-up of smart TVs (with an integrated internet connection) has also seen a significant increase, with a quarter of households (27%) now owning one, compared to 20% in 2015.

Six in ten households (61%) owned a digital video recorder (DVR) in early 2016, and this has remained relatively stable since 2014. However, the decline in ownership of DVD players continues, with 67% of households having one, compared to 85% five years ago. Take-up of games consoles has also declined, with 44% of households reporting having one, down from 49% in 2015, probably due to the increasing popularity of playing games via smartphone or tablet apps.

**Figure 1.5 Household take-up of digital communications/ AV devices: 2006-2016**



Source: Ofcom Technology Tracker. Data from Q1 of each year 2006-2014, then H1 2015-2016. Base: All adults aged 16+ (2016 n=3737).

Note: The question wording for DVD player and DVR was changed in Q1 2009, so data are not directly comparable with previous years.

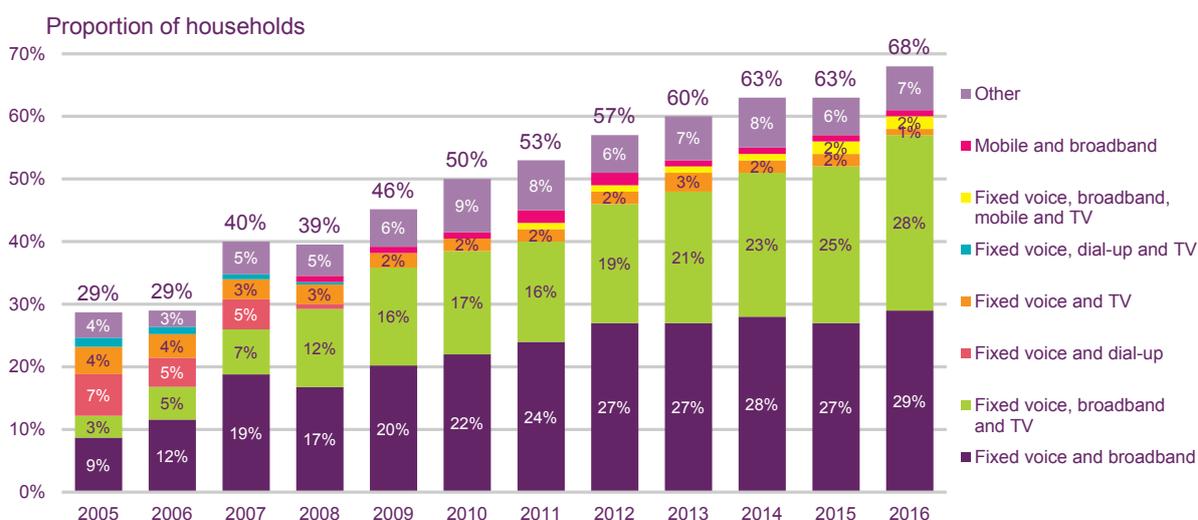
\* Internet-connected dongle or set-top box includes NOW TV set-top box, Roku, Google Chrome, Amazon Fire TV stick, Amazon Fire TV, Apple TV

### 1.3.4 Purchasing communications services in a bundle

#### Nearly seven in ten households report purchasing services in a bundle

Nearly seven in ten households (68%) reported buying at least two of their communications services together in a bundle in 2016, a five percentage point increase on the previous year's figure (63%). Dual-play packages of landline and broadband, and triple-play packages of landline, broadband and TV, were the most popular.

**Figure 1.6 Take-up of bundled services**



Source: Ofcom Technology Tracker. Data from Q1 of each year 2005-2014, then H1 2015-2016. Base: All adults aged 16+ (2016 n=3737)

QG1: Do you receive more than one of these services as part of an overall deal or package from the same supplier?



# 1.4 The Digital Day

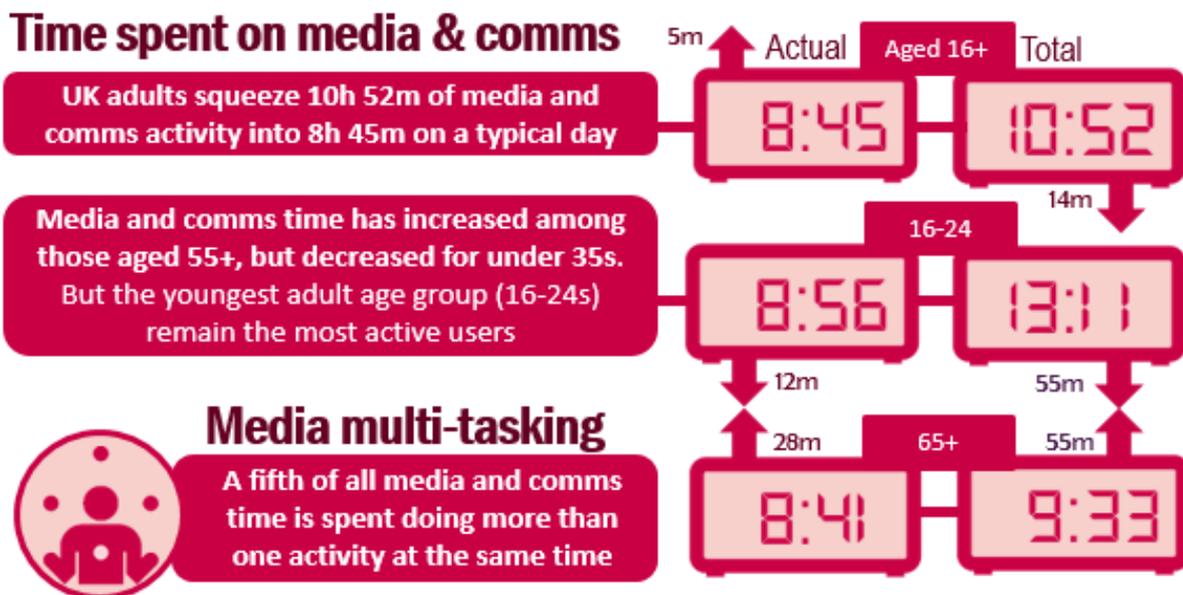
This section provides an overview of the core results from our 2016 Digital Day study, drawing comparisons with data from the previous study in 2014. More detailed findings are covered in the individual chapters of this report, and further data are available to access online via the dedicated website at [www.digitaldayresearch.co.uk](http://www.digitaldayresearch.co.uk).

## 1.4.1 Key findings

Our Digital Day research shows that we are spending more time on media and communications than on sleeping. The average UK adult uses media and communications services for 8 hours 45 minutes, and sleeps for 8 hours 18 minutes.

Overall, the amount of time spent on media and communications (8h 45m) has remained stable since 2014, but this does mask some generational shifts. Those aged 65+ have increased their time by 28 minutes to 8 hours 41 minutes. For younger people the time has fallen, with 16-24s spending 12 fewer minutes on media and communication. These shifts are explained in part by live TV viewing – with the younger age groups watching less of it and older people watching more.

Engaging with two or more media or communications activities at the same time is still popular. Thanks to media multitasking, UK adults are squeezing 10 hours 52 minutes' worth of media and communications activity into the 8 hours 45 minutes of time actually spent over a typical day. This remains close to the 2014 findings: 11 hours 6 mins squeezed into 8 hours 40 mins each day.

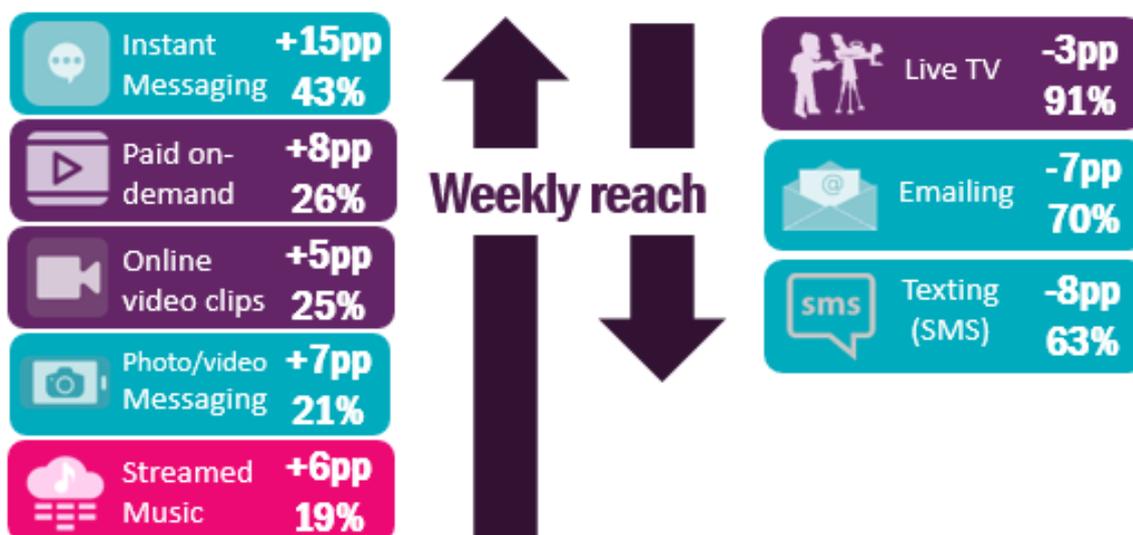


Compared to 2014, many people in the UK are now even better connected, through superfast broadband and 4G mobile. Because of this, the communications and media habits of adults of all ages are shifting, as people embrace newer on-demand and online services, and take advantage of their smartphones and tablets to stay connected.

There have been some key shifts in the services that people are using, including watching TV programmes, listening to audio, and communicating with each other. Instant messaging (IM) has become increasingly popular; the proportion of people using IM services such as WhatsApp is up from 28% to 43%, and photo/ video messaging (MMS) has risen to more

than a fifth of adults in a given week. This increase is at the expense of SMS text messaging and emailing; both of these are declining. The popularity of paid on-demand services such as Netflix and Amazon Instant Video has grown (from 18% to 26% weekly reach) as has the proportion of people watching video clips online (20% to 25%), while the proportion of people watching live TV has declined (albeit still reaching more than nine in ten people each week).

And while the proportion of people listening to live radio and making phone calls has remained the same since 2014, the proportion of people who are using newer online services like streaming audio and video calls has grown.

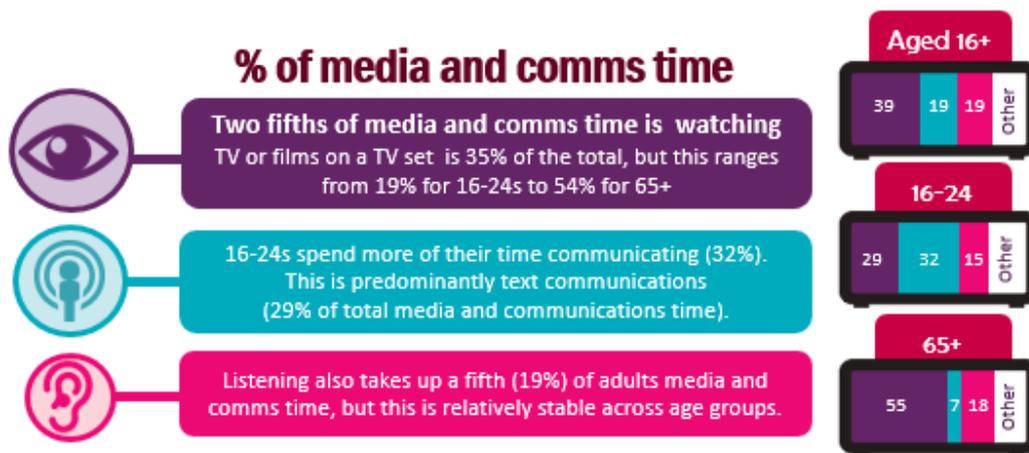


16-24 year olds are more likely to embrace these newer on-demand and online services. Today, instant messaging is more important to this age group than any other means of communication, and playing video games is seen as being as important as watching live, recorded or paid-for on-demand TV. However, for older adults, watching live TV remains the most important media activity.

Despite this older people are increasingly exploiting digital communications technology. Although they tend to use more established services such as linear TV, SMS or email, many are also embracing social media or on-demand services (among 55-64s, 51% use the former and 42% the latter in an average week).

Smartphones are playing an increasingly important role in keeping many of us connected throughout the day. Seventy-one per cent of UK adults now have one, up from 61% in 2014. Moreover, over two hours a day is spent using them, rising to nearly five hours for 16-24s.

While the relative popularity of different media and communications services has changed in two years, with a shift to on-demand and online services, the Digital Day research also highlights many areas unchanged since 2014. For example, watching audio-visual content still has the largest share of our total time spent on media and communications consumption, and live TV continues to represent the lion's share, despite recent declines.



## 1.4.2 Introduction

While Ofcom makes use of a wide range of industry research, to understand how people consume broadcast media and online content, this research generally provides limited insight into how people use all media and communications services and devices together, and how they form a central part of a consumer's day.

In Q1 2016 we conducted an in-depth quantitative diary study into UK adults' and children's<sup>6</sup> total media and communications activities, to provide an overview of the role of media and communications in people's lives. The study was last conducted in 2014, and so one of the primary objectives was to gauge how things have changed since then; the study was therefore designed to remain as consistent as possible in terms of methodology.

The research provides a snapshot of media and communications behaviour over a seven-day period, exploring when and how people use services and devices throughout the day, covering both personal and work/study use; in and away from home.

Adult participants recorded all their media and communications activities in a paper diary booklet for seven days, and this was transferred digitally on a daily basis using a dedicated website (completed by the respondent or with the help of a telephone interview)<sup>7</sup>:

## 1.4.3 Comparisons with industry data

As in the 2014 study, television industry data from BARB show weekly reach levels and volumes of activity comparable with this study. However, this study recorded lower reach and volumes than industry data for radio (comparing Digital Day results to the RAJAR database). A range of factors may have contributed to this difference. These include:

- The broad nature of the Digital Day survey; it covers a wide range of media, rather than focusing on one specific medium.
- Activities that receive lower consumer attention, or are undertaken passively, such as radio, may be less likely to be recalled.

These factors may explain differences between the two data sources.

<sup>6</sup> Within this report we focus on the data from the adults' diaries only. We plan to publish a separate children's report later on in the year alongside our children's media literacy annual report.

<sup>7</sup> A comprehensive description of the methodology is available in the technical appendix. This includes all questionnaire material, sample information and analysis definitions - [http://stakeholders.ofcom.org.uk/binaries/research/cross-media/2016/technical\\_appendix.pdf](http://stakeholders.ofcom.org.uk/binaries/research/cross-media/2016/technical_appendix.pdf)

### 1.4.4 Activities and definitions

The 28 individual media and communications activities that were recorded by participants were as follows (including the abbreviated terms used in reporting):

|                        | Activity  | Abbreviation used             |
|------------------------|---|-------------------------------|
| WATCHING               | TV (live – at the time it is broadcast, including using the red button)   | Live TV                       |
|                        | Recorded TV (programmes or films stored on your personal/digital recorder box using e.g. TiVo, Sky+ or Freeview+)                               | Recorded TV                   |
|                        | On-demand/ catch-up TV or films (free) e.g. BBC iPlayer, All 4, Sky or Virgin on demand   | Free On-Demand                |
|                        | Downloaded or streamed digital TV or films (paid-for) e.g. Amazon Instant Video, Netflix, iTunes, Blinkbox, Sky Store, DisneyLife               | Paid On-Demand                |
|                        | TV or films on DVD, Blu-ray, VHS video  | DVD/Bluray                    |
|                        | Short online video clips on e.g. YouTube, News sites (including those through Social Networking sites)  | Online video clips            |
| LISTENING              | Radio (at the time of broadcast)  | Live Radio                    |
|                        | On-demand/ 'Listen again' radio programmes or podcasts  | On-Demand Radio               |
|                        | Personal digital music or audio collection (e.g. on an ipod, smartphone, computer etc.)   | Personal digital audio        |
|                        | Streamed online music (e.g. Spotify, Apple Music, Amazon Music and Google Play)   | Streamed music                |
|                        | Personal music collection on CD, record or tape   | CD/Vinyl                      |
|                        | Music videos (i.e. music video channels or sites that you mainly used for background listening such as through YouTube or on MTV)               | Music videos                  |
| COMMUNICATING          | Through a Social Networking site e.g. Facebook, Twitter (excluding checking updates)  | Social networking             |
|                        | By Instant Messaging (e.g. Facebook Messenger, WhatsApp, BBM)   | Instant messaging             |
|                        | By email (reading or writing emails)  | Emailing                      |
|                        | By text message (SMS, including iMessage, reading or writing)   | Texting                       |
|                        | By photo or video messages (MMS, viewing or sending) or Snapchat  | Photo or video messaging      |
|                        | By phone call   | Phone calls                   |
|                        | By video calls (including Skype, Facetime, etc)   | Video calls                   |
| READING/BROWSING/USING | Games (on an electronic device e.g. phone, games console)   | Video games                   |
|                        | A newspaper/article (printed or online/digital including apps)  | Newspapers (print or digital) |
|                        | A magazine /article (printed or online/digital including apps)  | Magazines (print or digital)  |
|                        | Other online news e.g. BBC News, Sky News (not through a newspaper site)  | Other online news             |
|                        | Sports news /updates (not through a newspaper site)   | Sports news/updates           |
|                        | A book (printed or eBook)   | Books (print or digital)      |
|                        | Online shopping or ticketing site/ app  | Online shopping/ticketing     |
|                        | Other websites or apps - including checking updates on a social network (e.g. Facebook, Twitter), online banking, etc                           | Other websites or apps        |
|                        | Other activities such as creating office documents/spreadsheets, creating or editing videos/music/audio, etc or other apps or software/programs | Other activities              |

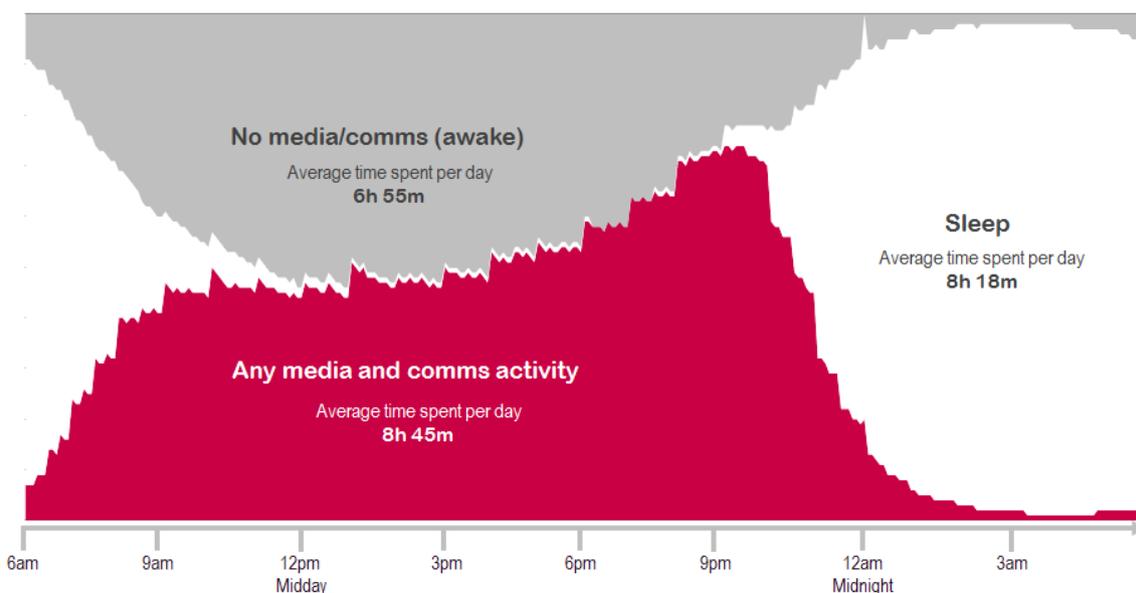
### 1.4.5 Overview of findings

#### More time is spent using media and communications than sleeping

On average, adults sleep for 8 hours 18 minutes in a 24-hour period. While awake they spend the majority of their time (8h 45m vs. 6h 55m) engaged in media or communications activity. These figures are very close to those in 2014, when media engagement was 8 hours 40 minutes per day.

Figure 1.7 shows that media and communications activity increases steadily across the day, reaching a peak in the evening when it accounts for a 74% share at 9pm.

**Figure 1.7 Media and communications activity, by time of day**

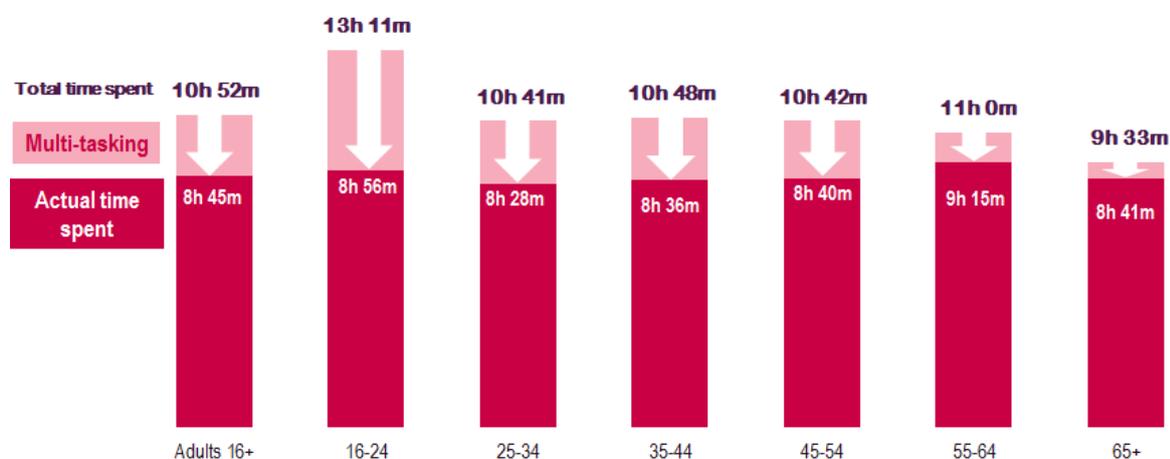


Base: Adults aged 16+ (1512)

**Thanks to multi-tasking, we are squeezing 10 hours 52 minutes of media and communications into 8 hours 45 minutes of actual time each day**

Taking into account activities that are performed simultaneously (e.g. watching and communicating concurrently, which 71% of respondents did at least once over the week), the total media and communications time undertaken by an individual equates to 10 hours 52 minutes. But as some of these activities are undertaken simultaneously, they are squeezed into 8 hours 45 minutes of actual time. Overall there has been little change in this respect compared to 2014, when 11 hours 6 minutes of activity was compressed into 8 hours 40 minutes.

**Figure 1.8 Average daily media and communications time, by age group**



Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

## Older adults watch more live TV than in 2014 whereas younger adults watch less

There have been noticeable age shifts in 'total' and in 'actual' (excluding multi-tasking activity) time spent per day. Both figures have fallen for the two youngest age groups: although the decrease in actual time spent is relatively low for 16-24s (12 mins) and 25-34s (11 mins), the total time spent has decreased to a greater extent (55 and 60 mins respectively) This suggests a reduction in the amount of media multi-tasking undertaken by these age groups.

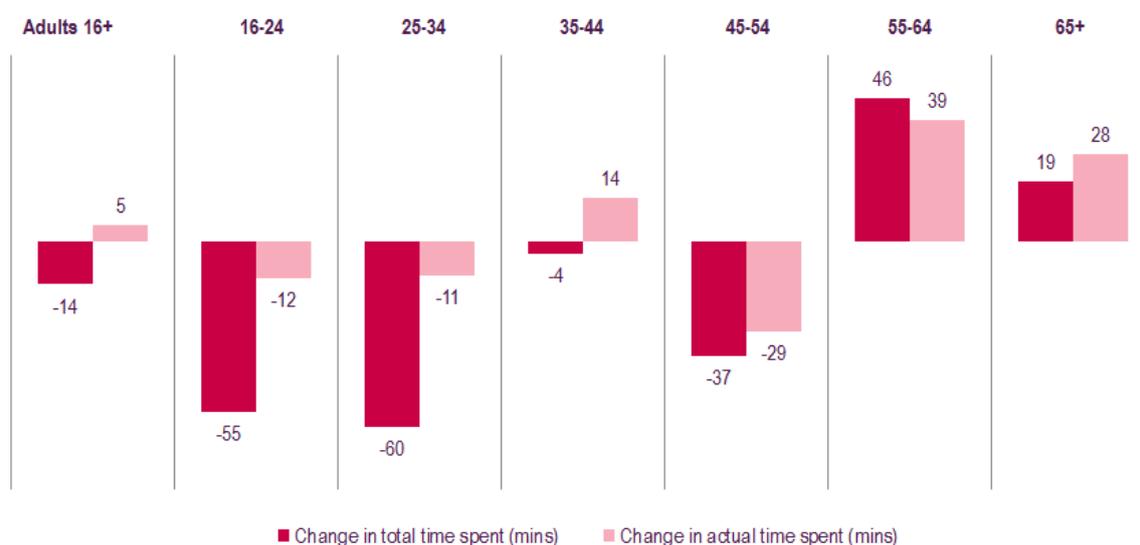
In terms of individual activities, live TV has decreased more than any other activity, among both age groups (42 mins for 16-24s and 37 mins for 25-34s), with on-demand viewing moving the other way (43 mins and 20 mins respectively).

It is evident from the data that on-demand viewing is less of a multitasking activity than live TV viewing; for example, seven of the top ten most popular media multi-tasking combinations involved live TV but none involved on-demand. This is most likely because content has been actively chosen and hence likely to generate more attention. As the other activities that have shown significant decreases in time spent by these age groups ('other websites or apps', texting and phone calls) are commonly associated with multitasking alongside live TV, this supports the theory.

The opposite has occurred for the over-55s. The actual time spent has increased by 39 minutes to 9h 15m for 55-64s, and by 28 minutes to 8h 41m for those aged 65 or over. Unlike the younger age groups, there is less of a gap between the increases in actual and total time spent, and the increase appears to be mainly driven by even more time consuming traditional broadcast content (live TV in the case of 45-54s and those aged 65 or over, and live radio and recorded TV in the case of 55-64s).

Despite this, 16-24s remain the most active media and communications users, by some distance, cramming 13h 11m worth of activity into 8h 56m, compared to 9h 33m worth of activity into 8h 41m for 65+ year olds.

**Figure 1.9** Changes in daily media and communications time since 2014, by age



Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

The following table shows the activities that have had the largest impact on the changes in total time spent per day, shown in the previous chart:

**Figure 1.10 Changes in time spent on specific activities since 2014, by age**

| Age   | Change   | Activities driving changes in total media and communications time   |
|-------|----------|---|
| 16-24 | -55 mins | 'Other websites or apps' and 'Other activities' (both -14 mins)<br>Live TV has decreased by 42 mins, but on-demand has increased by 43 mins           |
| 25-34 | -60 mins | Texting (-31 mins) and phone calls (-13 mins)<br>Live TV has decreased by 37 mins, but this is partly compensated by a 20 min increase for on-demand. |
| 45-54 | -37 mins | Live TV (-36 mins)  |
| 55-64 | +46 mins | Live radio (+23 mins) and recorded TV (+17 mins)  |
| 65+   | +19 mins | Live TV (+36 mins), although emailing has decreased by 11 mins.   |

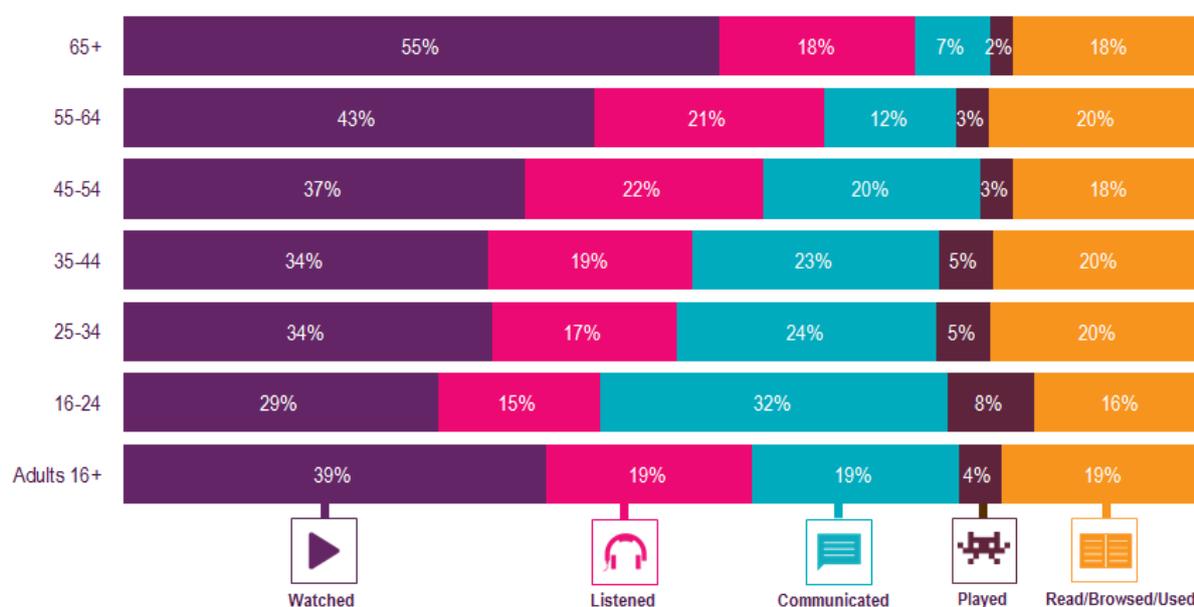
Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

**While watching is the most popular activity overall, young adults spend more time communicating**

Watching accounts for 39% of the total time spent on media and communications. For most age groups it represents the most popular type of activity. However, 16-24s spend more of their time communicating (32% vs. 29% for watching).

The distribution of time spent on the five broad activity types (watching, listening, communicating, playing, and reading/browsing/using) has remained relatively stable since 2014 across all age groups, despite the changes in duration shown previously.

**Figure 1.11 Proportion of time attributed to activity types, by age group**

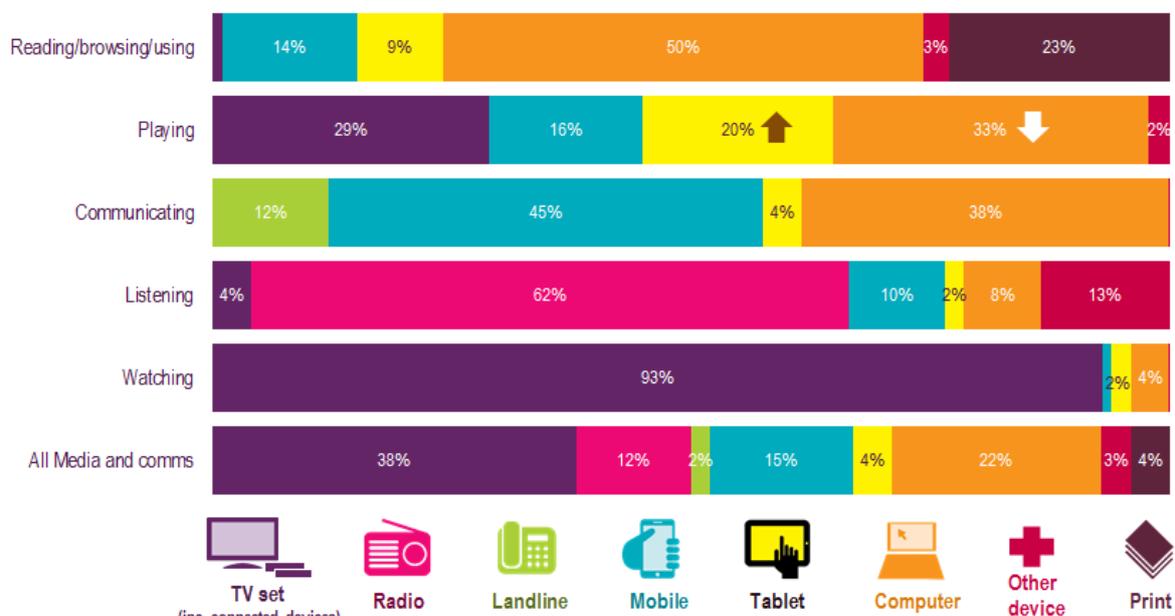


Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

Looking at how these activities map onto device use, most watching takes place on a TV set (93%) and most listening takes place on a radio set (62%). Communication time is primarily spent on mobile phones (45%) and computers (including desktops or laptops: 33%), with the latter also accounting for half of the time spent reading/browsing/using.

Compared to 2014, the proportion of time spent playing video games on a tablet has increased from 15% in 2014 to 20% in 2016, while on computers it has decreased from 47% to 33%.

**Figure 1.12 Proportion of time attributed to activity types, by device**



Base: Adults aged 16+ (1512)

### Live TV and radio combined account for nearly two-fifths of adults' media and communications time

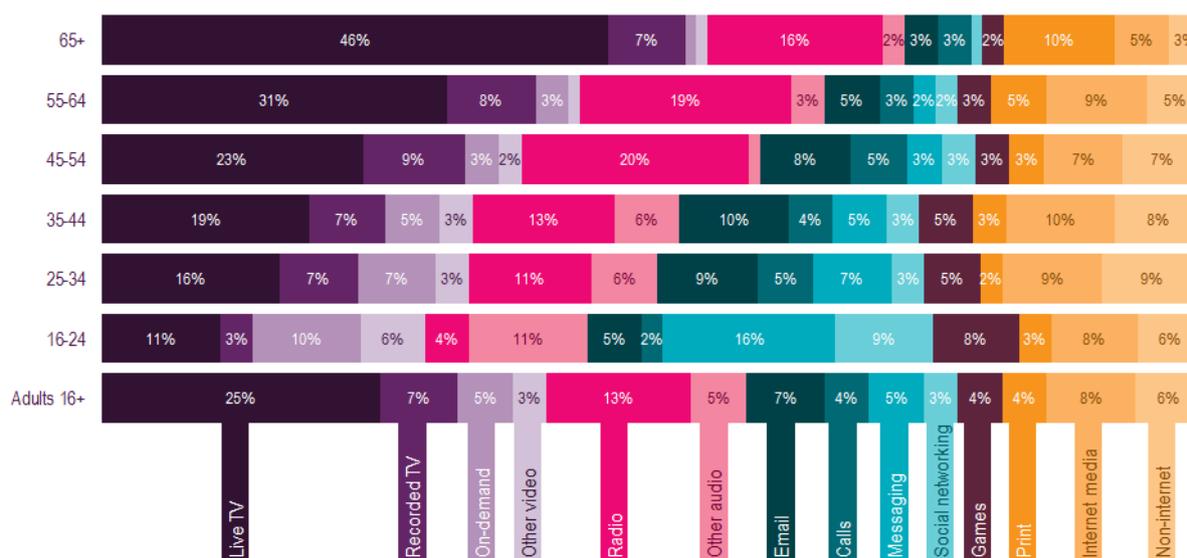
16-24s spend a similar amount of their media and communications time watching live (11%) and on-demand TV (10%). They also spend similar proportions of their time listening to non-radio content (11%), and social networking (9%), while 16% of their time is spent messaging<sup>8</sup> in one way or another. This differs from all other age groups, where live TV and radio dominate media time (generally increasing with age) and email is the most prominent communications method.

For watching TV, 16-24s are more likely to use devices such as smartphones, tablets and computers. They have the lowest proportion of overall time attributed to watching TV on a TV set, at 19% (a decrease from 24% in 2014), and a higher share on other devices (7%, compared to 3% of 65+ year olds). For 65+ year olds, watching TV on a TV set has actually increased in share, from 49% to 54%.

In total, 29% of 16-24s' total media and communications activity is text communication (an increase of 6pp since 2014), compared to 16% for all adults and just 4% for 65+ year olds.

<sup>8</sup> For the purpose of this analysis, messaging includes instant messaging (IM), photo/video messaging (MMS) and text messaging (SMS)

**Figure 1.13 Proportion of time attributed to activities, by age**



Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

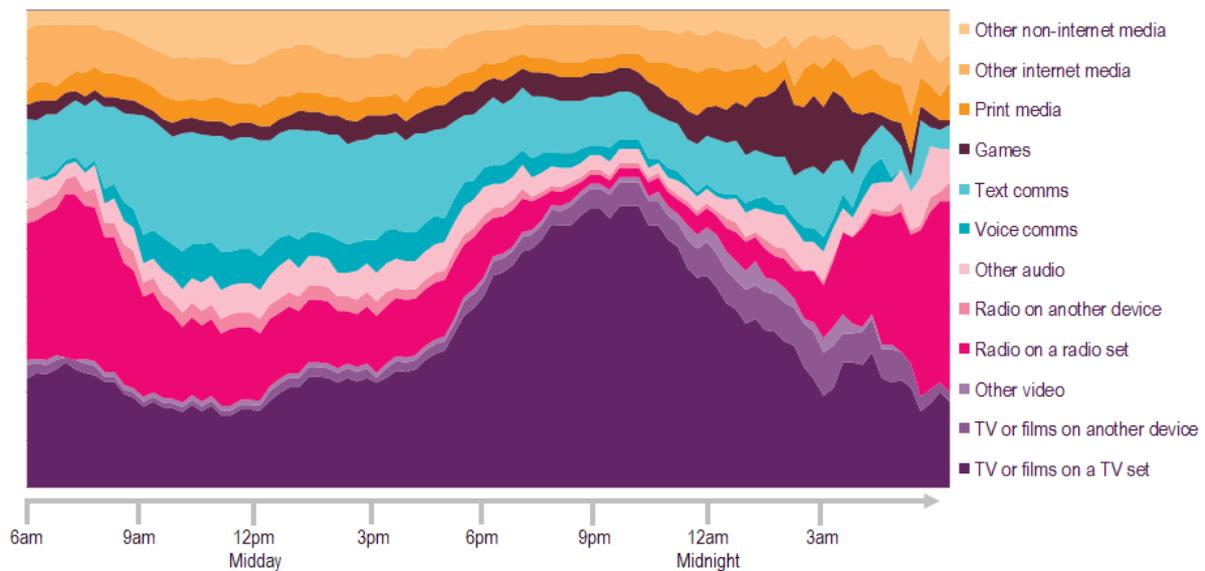
### Watching TV or films on a TV set still dominates evening media time

Figure 1.14 shows the proportion of all media and communications activity participated in by time of day (across a week) among all adults. As we have seen throughout, this does differ substantially by age group:

- Watching TV or films on a TV set<sup>9</sup> is the most popular activity in the evenings, taking up 59% of media and communications activity time between 9.15 and 10pm, exactly the same share for this time period in 2014. This figure is 30% for 16-24s and 82% for those aged 65+. Although it does still constitute the majority share for the younger age group at this time of the evening, text communications are not far behind (25%).
- Radio on a radio set comprises 35% of time between 7.15 and 7.30am (51% for 65+ year olds vs. 25% for 16-24s). This is an increase since 2014 (30%), with TV on a TV set reducing its share from 31% to 25% at this time of day.
- Text communications retains a stable share (19-25%) at all times between 8.30am-5pm (largely driven by email at work). The highest share it reaches, at any time of day, for 65+ year olds is 11% (at 10am), compared to 43% at 9am for 16-24s.

<sup>9</sup> Watching TV or films on a TV set includes live, recorded, on-demand (paid or free) and DVD/Blu-ray

**Figure 1.14 Proportion of media and communications, by time of day**

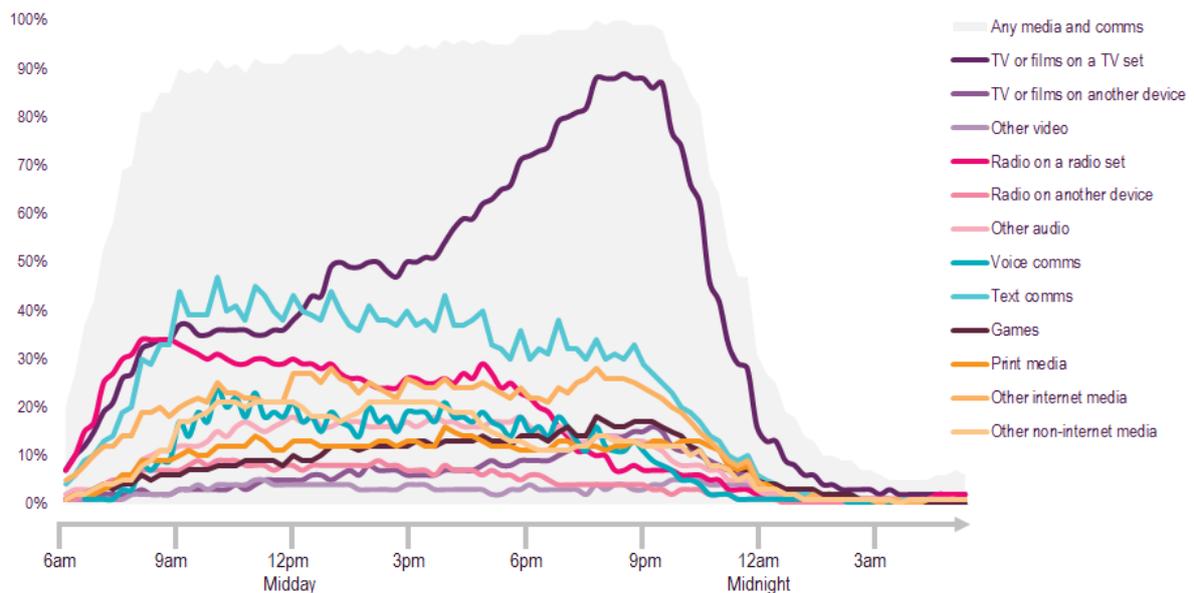


*Base: Adults aged 16+ (1512)*

The dominance of TV in the evening period, and the popularity of radio in the morning (this has the highest reach levels of all activities until 9am), is reflected in terms of ‘reach’ (the proportion of adults who do each activity) at specific times of the day.

Around nine in ten adults watch TV or films on a TV set between 8pm and 10pm at any point across a week. This compares to a peak of 47% for text communications (at 10am), which is higher than TV from 9am to midday, but decreases thereafter.

**Figure 1.15 Weekly reach of grouped activities, by time of day**

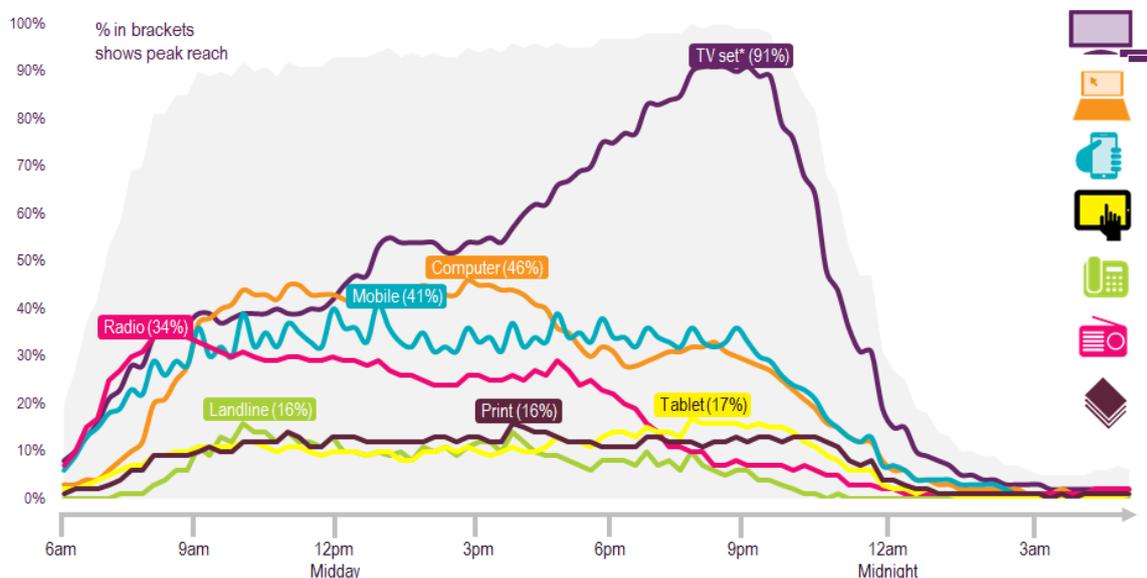


*Base: Adults aged 16+ (1512)*

The patterns shown above for TV and radio content across the day are clearly mirrored by their primary associated devices, i.e. the TV set and radio set, as shown in Figure 1.16.

The use of mobile phones also closely mirrors text communication, remaining relatively steady from 9am to 9pm with a peak of 41% at 1pm. Use of computers has a slightly higher peak (46%) at 3pm, and is then steady during the day, with at least two-fifths of adults using one between 9.45am and 5pm (reflecting its reliance for work). Use of tablets, landlines and print media is also fairly stable at most times of the day, but never achieves a reach of more than 20% throughout the day.

**Figure 1.16 Weekly reach of devices, by time of day**



Base: Adults aged 16+ (1512)

### Instant messaging has become more popular, at the expense of SMS and email

Figure 1.17 shows the proportion of adults who did each activity at least once during their diary week. Despite its decrease of 3pp, live TV still reaches a higher proportion of adults than any other media and communications activity, at 91%, as was the case in 2014. This is followed by phone calls (83%) and live radio (76%).

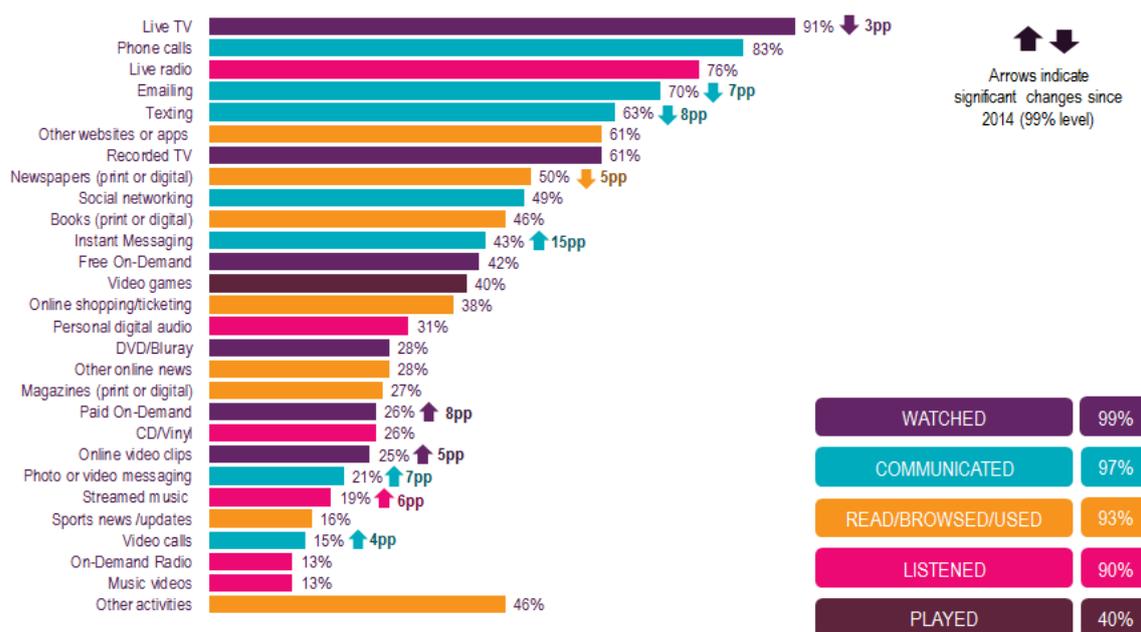
Although emailing and texting remain the most commonly-used text communication methods at 70% and 63% respectively, they have both decreased since 2014 (by 7pp and 8pp), while instant messaging and photo/video messaging have increased (by 15pp and 7pp).

For instant messaging, the increase has occurred across all age groups. Although 16-24s are the prominent users, at 53%, the increase among this age group (+15pp from 2014) has been less substantial than for 25-34s (+28pp) and 35-44s (+22pp).

### Subscription on-demand has become popular but TV reach remains high

There have also been significant increases in weekly reach for paid-for on-demand TV (26% from 18%), online video clips (25% from 20%) and streamed music (19% from 13%). All three of these activities now reach over half of 16-24s in a given week (57%, 59% and 51% respectively). The only other activity to show a decrease is reading newspapers (including print and digital versions), which fell by 5pp to 50% of adults.

**Figure 1.17 Weekly reach of media and communications activities**

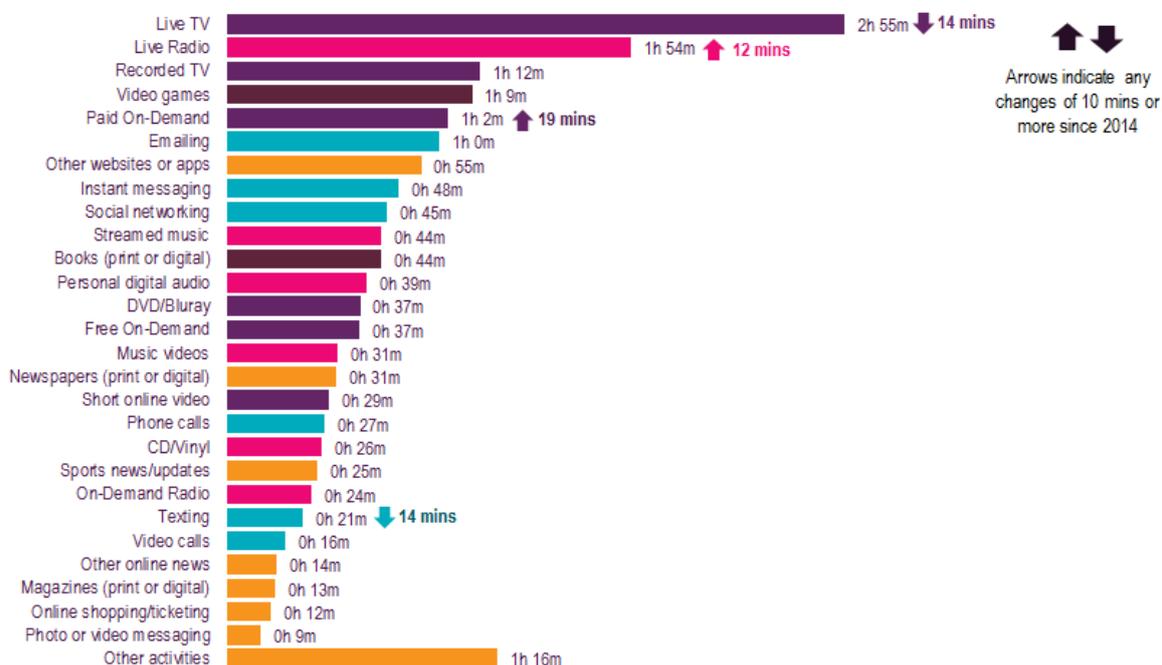


Base: Adults aged 16+ (1512)

Earlier on we discussed how overall time spent on media and communications activities has remained relatively consistent across *all adults*, but there have been a number of significant shifts within age groups, driven by certain activities. We can look at these changes among only those people who do each specific activity across the week.

Among those who watch live TV at all during a week, the average duration per day has decreased by 14 minutes since 2014 to 2h 55 mins. However, this activity still accounts for about an hour more than the second highest activity, live radio (up by 12 minutes since 2014, averaging 1h 54m per day). Two other activities have changed by ten minutes or more since 2014: watching paid on-demand TV (up by 19 mins) and texting (down by 13 mins).

**Figure 1.18 Average time spent on activities per day (excluding zeros)**



Base: Adults aged 16+ (1512)

By age group, findings are largely consistent with those mentioned earlier in connection with the breakdown of total media and communications time):

- The decrease in time spent watching live TV is more prominent among those aged under 35: from 2h 24m to 1h 45m for 16-24s, and from 2h 32 to 1h 59m for 25-34s. For these age groups, time spent watching paid-for on-demand content has increased by 37 minutes (to 1h 19m) and by 20 minutes per day (to 1h 8m).
- In contrast, the 4h 24m spent by 65+ year olds watching live TV is an increase of 27 minutes since 2014. Even among paid or free on-demand viewers, the average time spent watching this type of content per day (35 mins) is much lower for 65+ year olds than for 16-24s (1h 28m).
- The two generic reading/browsing/using activities, 'Other websites or apps' (down by 22 mins to 1h 3m) and 'Other activities' (down by 31 mins to 1h 19m) have fallen considerably among 16-24 year olds since 2014. There are several factors that may have contributed to the reduction in these types of activities:
  - Many people now have access to faster connections on 4G / superfast broadband, allowing online tasks more quickly and efficiently.
  - The increased use of apps on mobile devices tends to be more task-driven, with a reduction in browsing, thereby enabling more efficient use of time.
  - Other sources suggest that a significant number of people are consciously limiting the amount of time they spend online ('digital detoxing', which is explored in section 1.5 of this report).
  - Our media literacy work<sup>10</sup> has found that since 2014 an increased number of people are only using websites they know, thereby limiting their repertoire to services that provide multiple services in the same place (e.g. Facebook).

### **16-24s consider instant messaging as their most important means of communication**

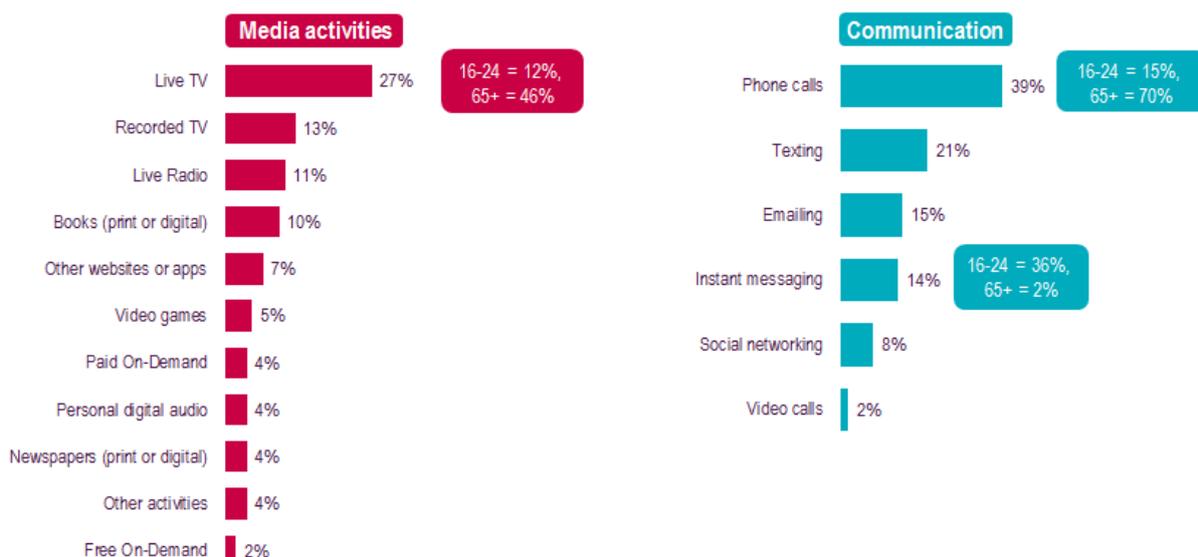
Perceived importance of media activities largely reflects usage. When asked which media activities, from a list, they considered to be the most important to them, live (27%) and recorded TV (13%) were, taken together, cited by a fifth of adults. However, this varies substantially by age, ranging from 12% of 16-24s to 46% of those aged 65+. For the former, responses are much more varied: video games (12%), personal digital audio (11%), books (10%) and paid-for on-demand video (10%) all rank alongside live (12%) and recorded TV (11%).

When we asked the same question, but in relation to communication methods, the results also varied heavily by age. While on average two-fifths of adults thought phone calls were the most important method, this ranged from 15% of 16-24s to 70% of 65+ year olds. In contrast, 36% of the younger age group felt that instant messaging was most important, compared to 2% of the older age group.

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<sup>10</sup> <http://stakeholders.of.com.org.uk/market-data-research/other/research-publications/adults/media-lit-2016/>

**Figure 1.19 Media and communications activities cited as most important**



Base: Adults aged 16+ (1512)

Q. Which of the following media activities/communications activities is most important to you personally?

**A fifth of all media and communications time is spent media multi-tasking**

Across a week, 92% of adults engage in any media multi-tasking (i.e. doing two or more activities simultaneously)<sup>11</sup>. This constituted around a fifth (19%) of all media and communications activity, ranging from 9% for those aged 65+ to 33% for 16-24s.

**Figure 1.20 Proportion of solus vs. simultaneous minutes, by age**

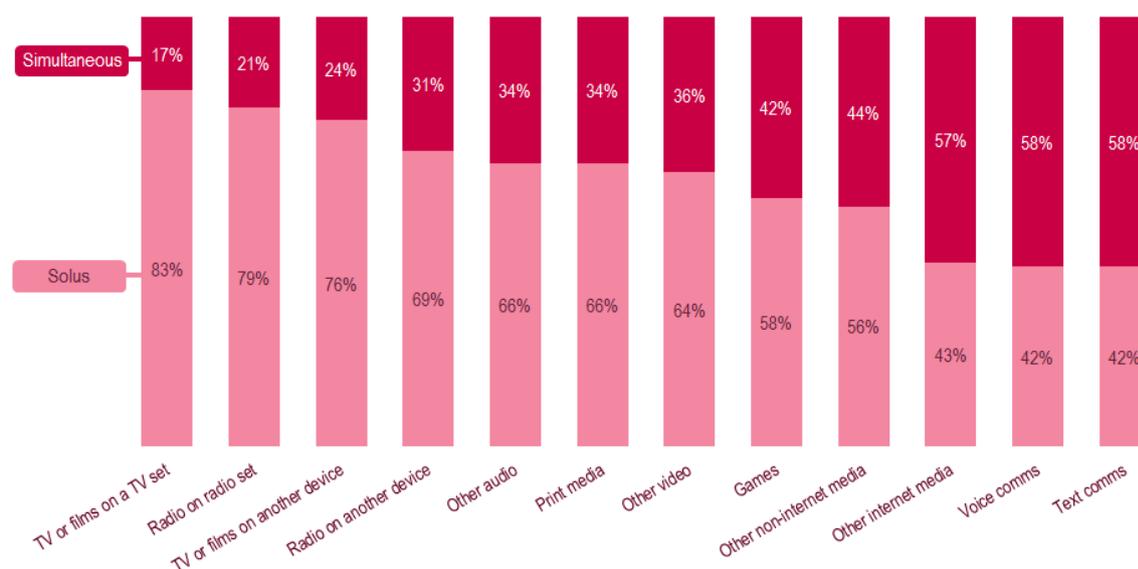


Base: Adults 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

Watching TV or films on a TV set was the activity most likely to be undertaken on its own (83% of total viewing), whereas the majority of text communication (56%) was undertaken at the same time as doing other media activities, such as watching TV (e.g. 30% of adults engaged in a phone call while watching TV).

<sup>11</sup> Note: the definition used for media multi-tasking has changed slightly from 2014, and so although they are similar, the results can't be directly compared accurately. Multi-tasking is calculated whenever there is a 1+ minute overlap of activities recorded on the diary. So if one activity finishes at 12:00 and another starts at 12:00, this is not counted as multi-tasking (as it was in 2014).

**Figure 1.21 Proportion of solus vs. simultaneous minutes, by grouped activities**



Base: Adults aged 16+ (1512)

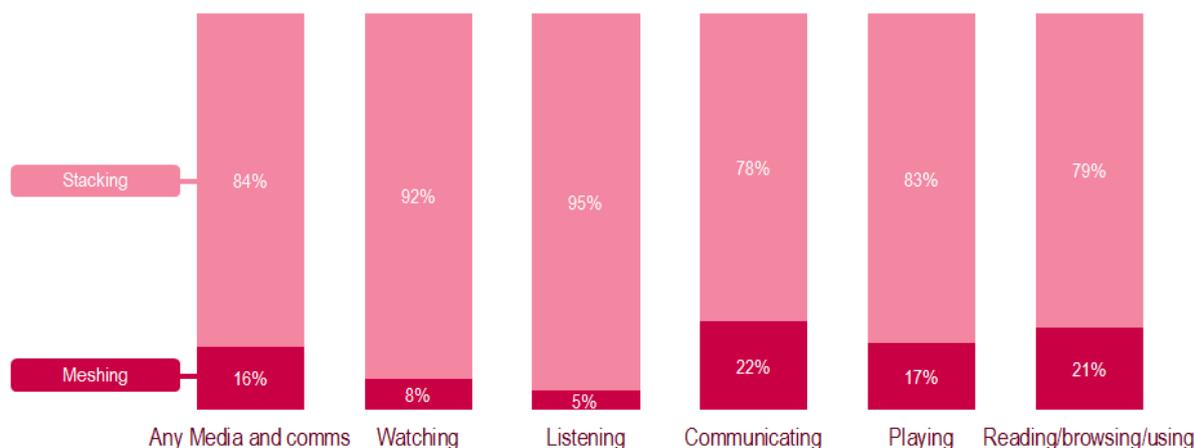
Media multi-tasking can be segmented into a further two categories<sup>12</sup>:

**Meshing** - When the simultaneous activities are related e.g. searching for info on a TV programme online while watching it.

**Stacking** - When the simultaneous activities are not related e.g. instant messaging with a friend while watching TV (not in relation to the programme).

The research showed that doing two or more unrelated activities ('stacking') is much more common (done by 90% of people across the week) than doing two or more related activities ('meshing'); just under four in ten do this in a week. This pattern is also shown in the overall distribution of time, with media stacking representing the largest share of multi-tasking (84%). Media stacking was most likely to occur in combination with watching TV or listening to the radio – watching live TV while talking on the phone was the most popular combination.

**Figure 1.22 Proportion of stacking vs. meshing minutes, by activity types**



Base: Adults aged 16+ (1512)

<sup>12</sup> Note: This was a new element introduced in the 2016 study, so no comparable data are available for 2014.

# 1.5 Coping in a connected world

## 1.5.1 Introduction

As we have seen in our Digital Day research in section 1.4, people spend the majority of their time awake engaged in media or communications activities, and they often spend more time involved in these activities than they do sleeping. This section builds on these findings, using research commissioned to investigate how people feel about being connected and what they see as the benefits and disadvantages. Indeed, daily internet use is now almost universal, with our research showing that nine in ten adults report going online every day. The internet also takes up a considerable proportion of people's time each week, with one in ten (11%) stating that they access the internet more than 50 times a day and the average internet user estimating they spend 25 hours online each week, which rises to 29 hours for those aged 16-24 and 26 hours for teens.

This volume of internet use demonstrates how being online is seen as a core part of many people's daily lives, with many respondents reporting feeling lost without it and admitting to being 'hooked' on their smartphones, tablets or other connected devices. Although the internet is valued by consumers for many reasons, ranging from facilitating communications to preventing boredom, time spent online has some drawbacks. Four in ten (41%) internet users think they spend too much time online, and some internet users have reported experiencing negative effects on their work or personal lives, on occasion causing them to neglect housework or arrive late for work; or simply by getting in the way of talking to friends or family.

The effects of the internet on relations with friends and family features heavily in this section, and respondents have contrasting feelings about this. While some believe that being online can make communications easier and can help them keep in touch with others, many report feeling ignored while others are busy using a connected device. The internet is affecting traditional face-to-face relationships; with respondents admitting to instant messaging, texting or emailing others even when they are the same room as them. The effects of device immersion are not just on friends and family; a quarter of people report that they have been bumped into in the street, because another person was too busy looking at their phone to see where they were going.

It seems that as a society, we just can't put our phones down. However, some people are starting to feel the downside of constant connectivity, and believe they spend too much time online. As a result, respondents are actively trying to reduce the time they spend online – some by taking a break from being connected.

### **Methodology:**

This section draws on new Ofcom research carried out between 31 March and 8 May 2016, conducted by BDRG Continental. This research used a mixed methodology comprising 1,401 online and 624 face-to-face interviews among adults aged 16+, and 500 online interviews among 12-15 year olds.

## 1.5.2 The importance of the internet

### **Many internet users say they are 'hooked' on their connected device**

The majority of people are spending a significant amount of time each week online, with some using the internet many times a day. We wanted to explore further whether people consider their time spent online is essential to their lives, and what sort of impact there would be if they were no longer connected.

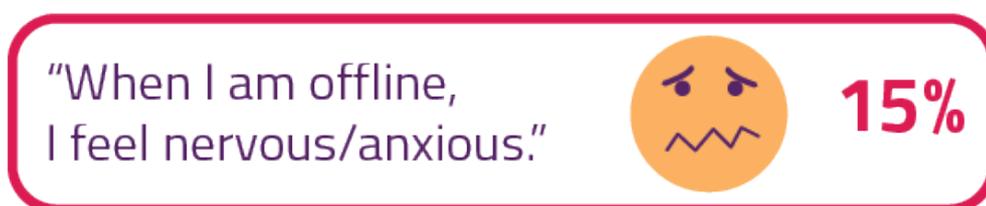
When asked on a scale of one to ten how important the internet was to their daily lives, three-quarters (75%) of internet users said that it was 'important'<sup>13</sup>. Mirroring the greater amount of time they spend online, compared to the older age groups, teens and 16-24s were significantly more likely than all internet users to rate the internet as important. This may be due to the fact that many in the younger age groups have grown up with constant connectivity and have not known life without the internet.



In addition to this, we asked respondents to say, on a scale of one to ten, how hooked they were on their connected device, and six in ten (59%) internet users said they were 'hooked' (between 7 and 10). Breaking this figure down, nearly a quarter (23%) were 'very hooked' (choosing 9 or 10) and 15% were 'completely hooked' (10). Relating to this, a third of internet users (34%) say that they find it 'difficult to disconnect from the internet'.



The way people are 'hooked' is illustrated by their sleeping behaviour: half (51%) of all mobile users make sure their phone is within reaching distance when they go to bed, while a similar proportion say the last thing they do before they sleep (45%) and when they wake up (44%) is to check their phone. A quarter (27%) of mobile users said that when they wake up during the night, the first thing they do is check their phone.



Given these results, it comes as no surprise that some respondents report negative effects if the device they use to access the internet is taken away or inaccessible for some reason. Just under half (47%) said that they feel lost when they cannot access the internet, rising to six in ten (59%) of 16-24s. Fifteen per cent of internet users and a quarter (25%) of 16-24s said that when they are offline they feel nervous and/or anxious.

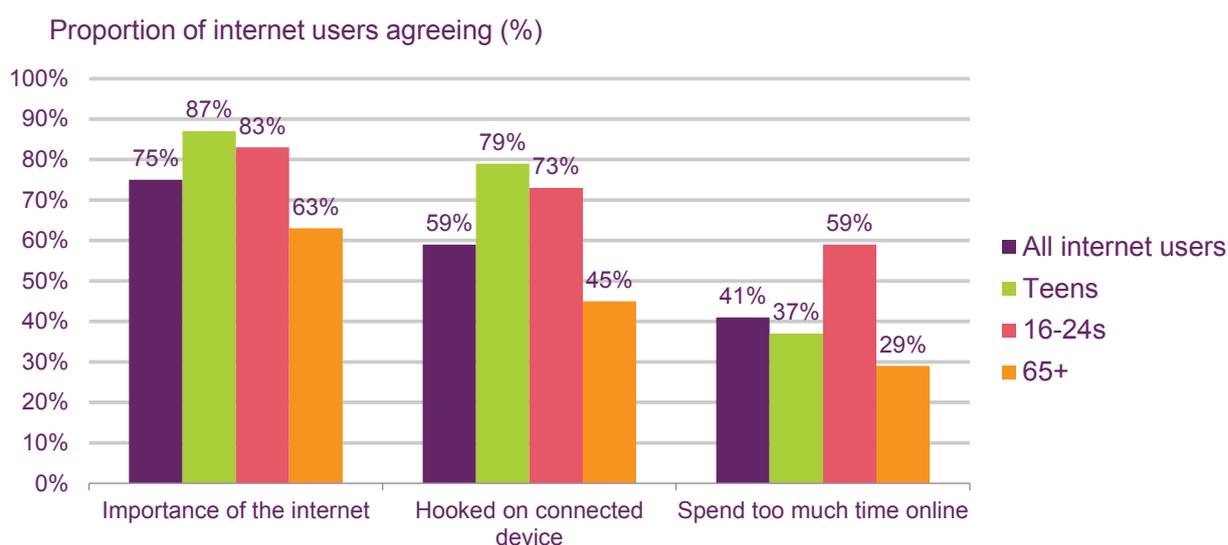
<sup>13</sup> 'Important' refers to an answer between 7 and 10.

## Six in ten 16-24s say they spend too much time online

While teens were among those most likely to say that the internet was ‘important’ to their daily lives, and to feel ‘hooked’ on their connected device, they were less ready to say they spent too much time online; just 37% agreed with this. This is possibly because teens have grown up with constant connectivity and largely associate with others who have similar online behaviour, so are less likely to think the time they spend online is too much. Those aged 16-24 were much more likely to say they spend too much time online, with six in ten agreeing.

While teens were less likely to say they used the internet too much, their friends and relatives held their online behaviour to a different standard. More than a third (35%) of teens said that a friend or relative had told them many times that they spend too much time online. This compares to 12% of all adult internet users.

**Figure 1.23 Attitudes towards the internet and connected devices**



Source: Ofcom research 2016

Base: All going online at least once a month (All: 1861, 16-24: 275, 65+: 309, teens: 494)

Q.C1 How much do you agree or disagree with the following statements (I spend too much time online); Q.D1 On a scale of 1 to 10, how important is the internet to your daily life? Q.D2 If you had to choose a number between 1 and 10, where 1 represented 'I'm not at all hooked on my [device most likely to use to go online from b5]' and 10 represented 'I'm completely hooked on my [device most likely to use to go online from b5]', which number would you choose for yourself?

## Too much time online can have negative effects on work and home life

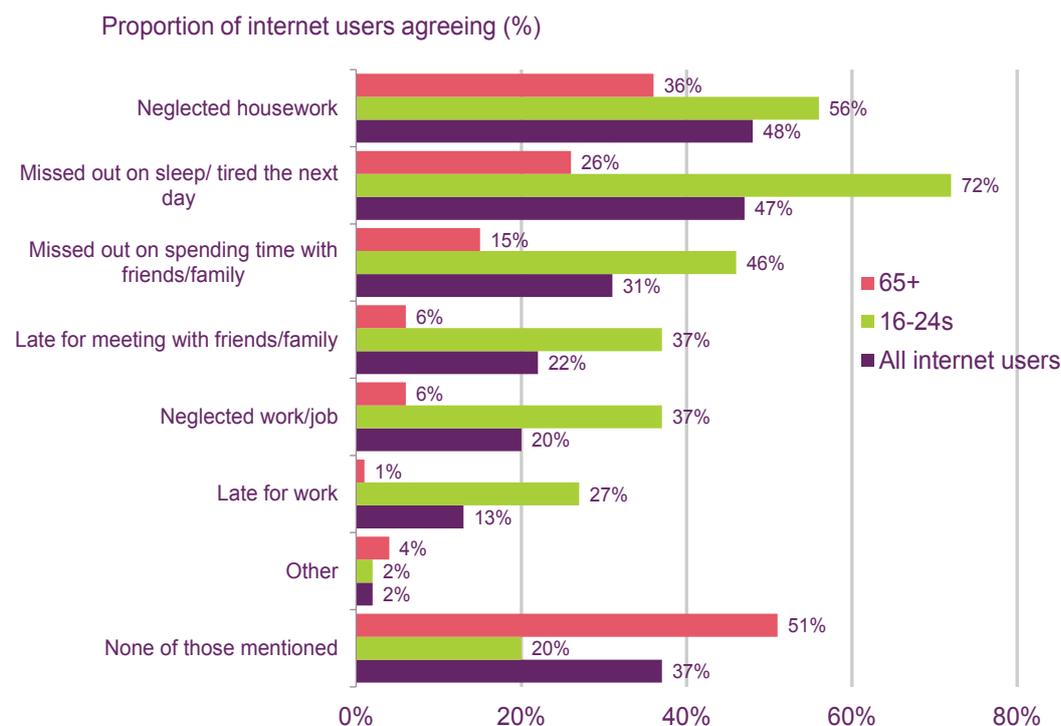
Because many internet users admit to feeling hooked on their connected device, and to spending too much time online, this may imply that they are neglecting other aspects of their life to make time for their internet activities. As the results show, people often let their online time over-run, thereby affecting their offline activities. For example, half (49%) of internet users said that on a daily basis, they spent longer than they intended browsing the internet, while four in ten (37%) said the same about social media. Young adults aged 16-34, and teens, were more likely to say they spent longer than they had planned on the majority of online activities we asked them about.

When we asked internet users whether various aspects of their work or personal life had ever suffered as a result of their spending too much time online, nearly half (48%) said that they had neglected housework, while a similar proportion (47%) said they had missed out on

sleep, or were tired the next day, rising to 72% of 16-24s. Reflecting the broad agreement that being online interrupts face-to-face communications, a third (31%) said they had missed out on spending time with friends and family, while two in ten (22%) said they had been late for a meeting with friends or family.

Some internet users reported that spending too much time online had had negative effects on their work or job, with 20% saying they had neglected their work and 13% saying they had been late for work. As with the previous figures, 16-34s are more likely to agree that all areas of their work and personal life had been negatively affected by spending too much time online. For example, nearly four in ten (37%) of 16-24s said that they had neglected their work or job, and 27% had been late for work.

**Figure 1.24** Reported negative effects of spending too much time online



Source: Ofcom research, 2016

Base: All going online at least once a month (All: 1861, 16-24: 275, 65+: 309)

Q.D7 Have any of these parts of your work or personal life ever been negatively affected by spending too much time online?

Despite not thinking they spend too much time online, nearly eight in ten (78%) teens said they had been told off by their parents for spending too much time on the internet, while 72% said they had missed out on sleep or had been tired the next day. As with the impact on adults' working lives, teens were quite likely to report negative effects on schoolwork; 60% agreed that they had neglected their schoolwork or studies, and 26% said they had been late for school. A large proportion of teens had sacrificed time socialising; 57% stated that they had missed out on spending time with friends or family, and 34% had been late for a meeting with friends or family.

### 1.5.3 Uses of the internet and effects of being online

People use the internet for a wide range of uses, including as a way to prevent boredom

"If I could not access the internet my life would be boring."  41%

The internet has a multitude of uses and functions: from checking news and current affairs, to undertaking a degree online, or planning a holiday. Many of our respondents indicated that they rely on the internet as a way to bring fulfilment to their daily lives: 51% of internet users said that because of the internet they never felt bored, while 41% said that if they didn't have access to the internet, their lives would be boring.

"Being online inspires me to try new things: travel, new restaurants or recipes, new experiences or entertainment."  63%

Many internet users believe that connectivity is broadening people's horizons: three-quarters (76%) say that being online enables them to have access to things they can't do offline. Six in ten (63%) say that the internet inspires them to try new things such as travel, new restaurants or recipes, new experiences or entertainment.

"Being online enables me to keep up-to-date and informed about current affairs and social issues."  78%

The internet also encourages people to stay informed. Nearly eight in ten (78%) internet users agree that being online enables them to keep up-to-date and informed about current affairs and social issues, and a further 58% say that they would know a lot less about the world or their local area if they weren't online.

#### People have contrasting feelings about their working lives and being connected

For those who have jobs which involve working on a computer and communicating with others online, greater connectivity has encouraged more working on-the-go in locations outside the workplace, such as at home or on public transport. Indeed, half (46%) of internet users said that being online has enabled them to work more flexibly.

However, if the traditional separation between home and work no longer applies, this can present challenges. As it becomes normal to check work emails while at home, or even finish off pieces of work there that didn't quite get finished on a Friday afternoon, some

people are struggling to get away from the stresses of their jobs – two in ten (20%) internet users report that being online makes them feel as though they are always at work.

### The internet helps people to keep in touch with others

“Being online helps keep me in touch with friends and family.”



72%

Whether through smartphone apps such as Snapchat or WhatsApp, via video calls, or via more traditional formats such as email, people are making the most of the internet to communicate. Just over eight in ten (82%) internet users agreed that new communications methods have made life easier, and similarly, 72% said that being online helped keep them in touch with friends and family. Indeed, our Digital Day research showed a sharp rise in the popularity of instant messaging (and to a lesser extent, photo/ video messaging) over the past couple of years, with 16-24s citing this as their most important method of communication.

Due to the recent surge in the creation of instant and video messaging apps targeted at the younger age groups, and the way in which social media has revolutionised communications, making it much easier to connect with many people at once across the world, it is unsurprising that the internet is a particularly important enabler of communications with friends and family for the younger age groups. Fifteen per cent of teens said they are most likely to keep in touch with friends through social media, compared to 10% of adults.

### ...but it can also hinder face-to-face communications

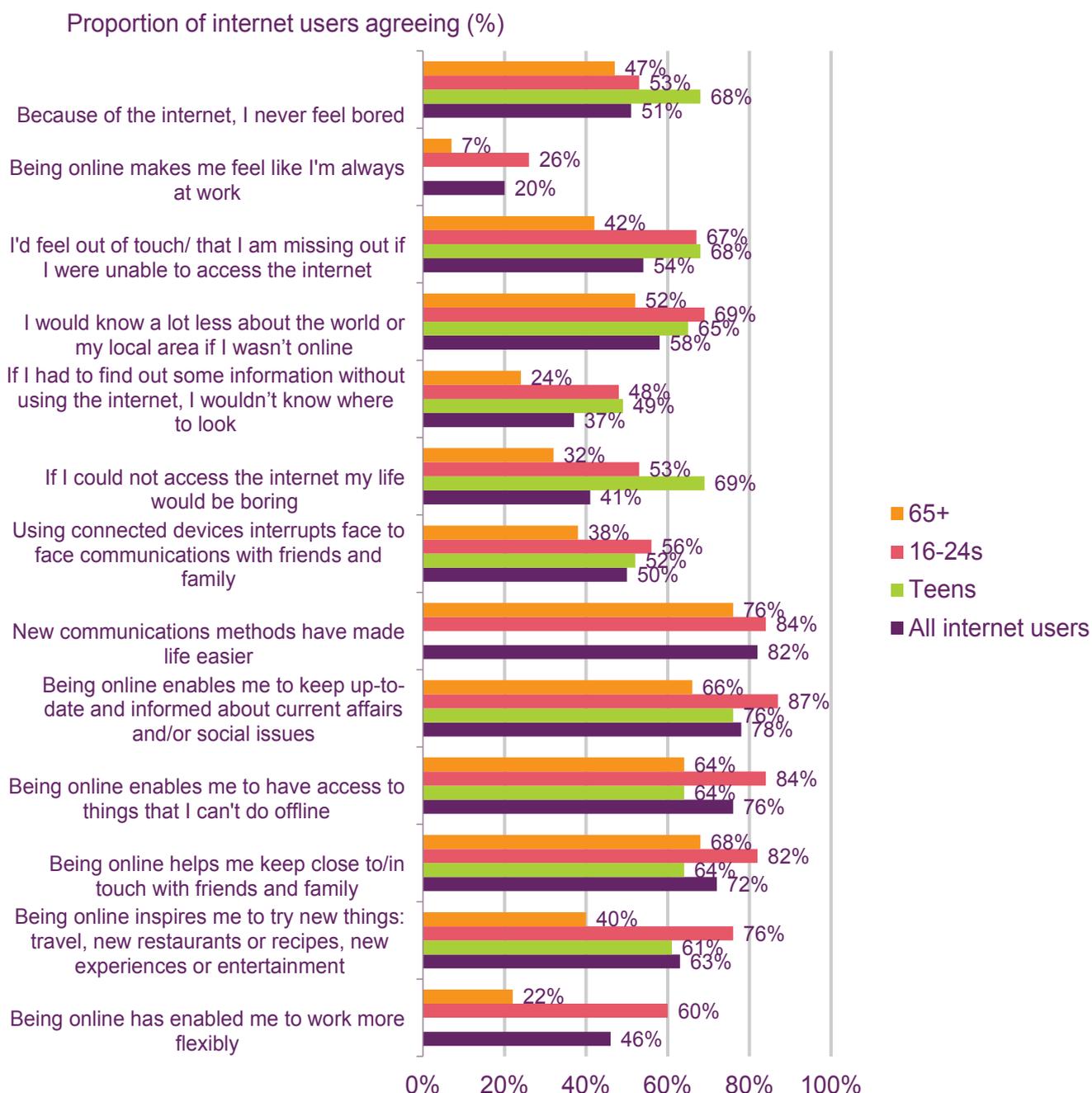
“Using connected devices interrupts face-to-face communications with friends and family, during mealtimes for example.”



50%

But in contrast, half of all internet users agree with the statement that using connected devices interrupts face-to-face conversations with friends and family. Agreement with this statement is more likely among those who are parents with children aged 5-15 (57%). Given that a quarter (26% vs. 17% of all adults) of parents also feel as though they are being ignored, on a daily basis, because others are engrossed in their phones or tablets, this indicates a particular parental concern that children’s use of connected devices is preventing them from engaging with, and spending time with their families.

**Figure 1.25 Effects of being online**



Source: Ofcom research 2016

Base: All going online at least once a month (All: 1861, 16-24: 275, 65+: 309, teens: 494)

Q.C1 How much do you agree or disagree with the following statements

Teens were not asked 'being online makes me feel like I'm always at work', 'new communications methods have made life easier' and 'being online has enabled me to work more flexibly'.

### 1.5.4 Effects on face-to-face communication?

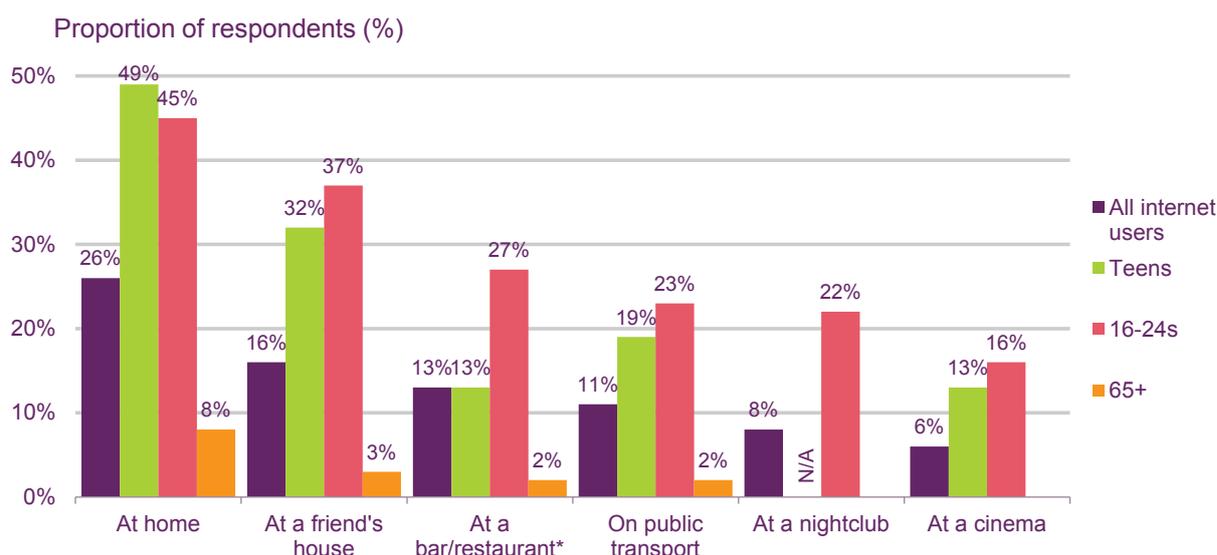
To further understand the impact of going online on face-to-face communications, this section looks at how people keep in contact with their friends and family, and the effect of connectivity on communications in different social situations.

## Digital devices are affecting face-to-face communications

As we saw earlier, many people believe that new communications methods have made life easier. Whether texting their partner to ask for a cup of tea, or instant messaging their friend in the cinema to avoid making a noise, they are using digital devices and connectivity in new and interesting ways. Just over a quarter (26%) of adults said they communicated with another person while in the same room as them at home, rising to 49% of teens. As with the earlier figures, 16-34s were more likely than all adults to say they had communicated, by any method other than face to face, with a friend or relative, in all the locations asked about.

Teens were asked about communicating with someone in the same place, via a device, in a different range of locations, and 32% said they had done so while at school. One in ten had done so at a sporting or music event.

**Figure 1.26 Communication via a device with those in the same room/ space**



Source: Ofcom research 2016

Base: All respondents (All: 2025, 16-24: 278, 65+: 421)

Q.D10A Have you ever communicated, by any method other than face-to-face, with a friend or relative, in any of the following places while they are in the same room/space as you?

\*We asked teens 'At a restaurant'

### The results highlight popular online activities such as sharing life events on social media or using emojis

The most popular reason for communicating via a device with another person while in the same room as them at home was 'because I was too lazy to walk over to them' (27%), while the most common response for doing so at a friend's house was 'because I didn't want other people to hear'. The main reasons for doing this in other locations are largely self-explanatory; e.g. the most popular reason at a nightclub was 'because it was too crowded', while at a cinema it was 'because I didn't want other people to hear'. There are other reasons for doing this that highlight online communication behaviours themselves; e.g. 23% of those who communicated through a device with others at a cinema said they did so 'to express myself through emojis', while 19% did so at a nightclub 'because we wanted other people to see on social media'.

Possibly to avoid being told off by a teacher, or to prevent classmates hearing a secret, the main reason why teens communicated via a device while at school was because they didn't want other people to hear (34%).

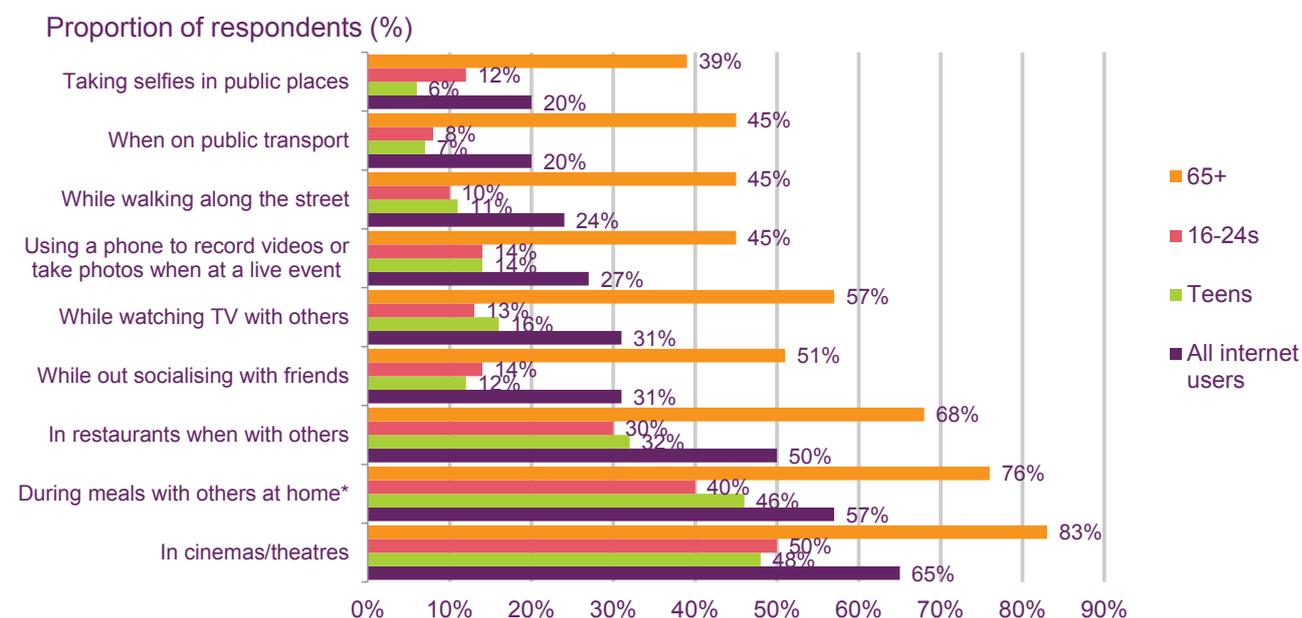
### Using smartphones and tablets in cinemas or at meal times is considered unacceptable by the majority of respondents

We asked respondents about the acceptability of using mobiles or smartphones in various social situations. The place where they thought it was most unacceptable to use a mobile or smartphone was the cinema/theatre (65%), followed by 'meals at home with others' and 'while at restaurants with others'.

Teens were less likely than adults to find using a mobile or smartphone unacceptable while watching TV with others (20% vs. 31%) and while out socialising with friends (26% vs. 31%). Those aged 65+ are more likely than all adults to find the use of smartphones and tablets unacceptable in all the situations we asked about.

We also looked at differences in opinion between those who never use the internet and those who are very heavy users (over 50 uses of the internet per day). In most locations that we asked about, non-internet users were more likely than all respondents to think that it was unacceptable to use a mobile phone. For example, more than three-quarters (77%) of non-users said that it was unacceptable to use a mobile during meals with others at home, while 57% of all respondents, and 45% of heavy users, said the same thing.

**Figure 1.27 Unacceptability of device use in social situations**



Source: Ofcom research 2016

Base: All respondents (All: 2025, teens: 500, 16-24: 278, 65+: 421)

Q.E1B And for each occasion, could you indicate the extent to which you think using a mobile/ smartphone at this time is acceptable?

\*For teens, we asked 'during meals with family at home'

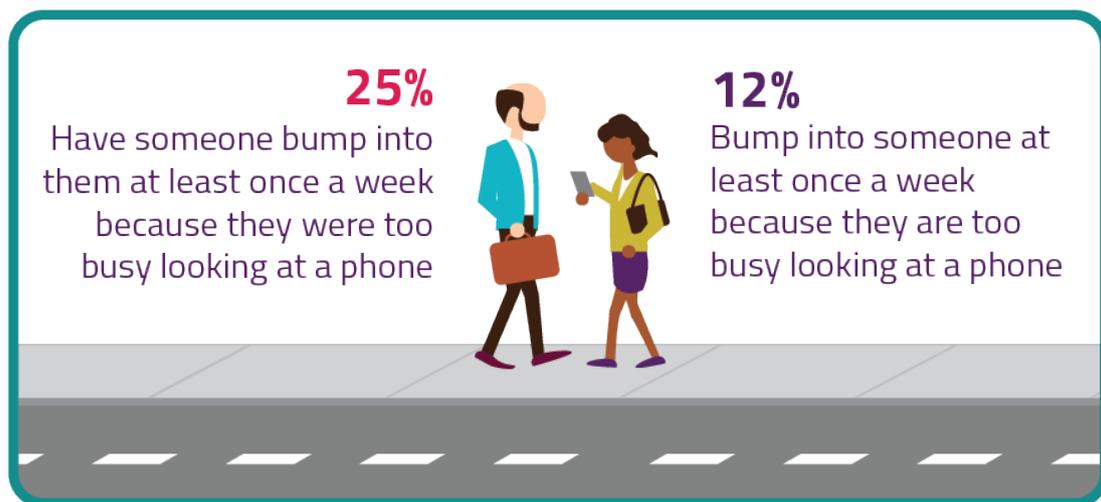
**While a third of teens had communicated via a device while in the same room as the other person at school, six in ten think it is unacceptable to do so in a lesson**

Half (49%) of teens said they had communicated via a device with another person while in the same room at home, and a third (32%) had done so at school. However, most teens (62%) reported that they felt using a mobile or smartphone during a lesson at school was unacceptable.

Teens were also asked to what extent they agreed with various statements about the use of mobile phones or tablets during lessons, and generally, similar proportions agreed with the negative and positive statements: 45% said it made the time pass more quickly, while 49% said 'it distracts me', 35% said 'it slows my learning' and 37% said 'it makes the lesson less boring'.

**Four in ten adults feel as though they are being ignored by a friend or relative, at least once a week, because they are engrossed in their smartphone**

We have seen that although many people think that using a device is unacceptable in certain social situations, a lot of people still do it. Therefore, we wanted to find out more about the direct effect of device use on relationships with others. Almost two in ten (17%) adults said that they feel as though they are being ignored by a friend or relative, on a daily basis, because that person is preoccupied with their phone or tablet. A further 23% said that they felt like this at least once a week. Those aged 16-34 are more likely to agree with this, perhaps because their peer group are also likely to be using their devices. Those aged 65+ are more likely to say this never happens, and again, this may be because this age group are the least likely to be using connected devices.



Being online, and being hooked on connected devices, may also have a negative effect on day-to-day relations with strangers. Eight per cent of all adults say that they have been bumped into on a daily basis while walking on the street, because the other person was looking at their phone, while a quarter said that this happens at least once a week.

However, 16-34s are the group most likely to say that they themselves bump into people (and things) while walking on the street, because they are looking at their phone. And again, this is likely to be because this age group are using their devices more frequently, and, as we saw earlier, are more likely to be using their phone while in the street. Just over one in ten (12%) of all adults bump into people or things on a weekly basis, while 24% of 16-24s and 25-34s admit to doing this.

### 1.5.5 Taking a break from being online

We have seen that the majority of adults and teens are daily internet users and are spending a significant proportion of their time online, often unplanned. But our Digital Day research showed that connectivity isn't entirely taking over our lives; time spent on media and communications activities is broadly similar to levels two years ago, and among young adults it has actually decreased slightly. In this final section we will explore whether constant connectivity has led to a desire to disconnect or to embark on a 'digital detox'.

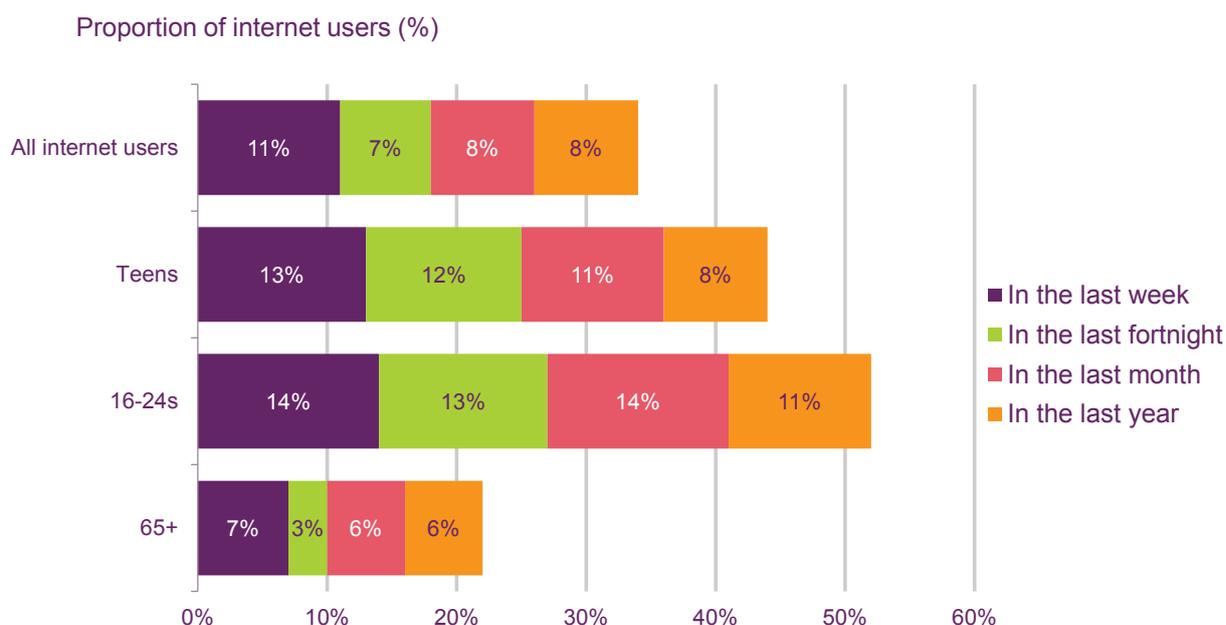
**'Digital detox'** is a term frequently used in the media. For the purposes of this research, it refers to a period of time when a person makes a conscious decision not to go online or use connected devices. This period of digital abstinence can range from less than an hour to indefinitely, but is ultimately regarded as an opportunity to focus on offline activities such as exercising, socialising with friends and family, doing housework or homework, or simply relaxing.

#### About a third of internet users have taken a break from being online

We have seen that four in ten internet users believe that they spend too much time online. Many have seen negative consequences on their work and personal life; from being late for their job to spending less time with friends and family. This may have encouraged some to reduce their time spent online; when asked about the last time they had purposely gone on a digital detox, overall, a third (34%) of internet users said that they had ever done this, while one in ten said they had done so in the last week. Interestingly, given that they were the most hooked on their devices, teens were more likely to say that they had ever gone without internet access (44%).

A quarter (25%) of those who said they had ever spent a period of time without the internet said they had done it for between half a day and a full day, while two in ten had done so for up to a week. A much smaller proportion of people had done it for longer than a week.

**Figure 1.28** When was the last time internet users did a 'digital detox'?



Source: Ofcom research 2016

Base: All going online at least once a month (All: 1861, 16-24: 275, 65+: 309, teens: 494)

Q. F1A When was the last time you purposely spent a period of time without accessing the internet because you thought you were using it too much?

The most common reason for going without the internet was 'to spend more time doing other things' (44%) and 'to spend more time talking to my friends or family' (38%). This was also a common reason for teens to go without the internet (39%).

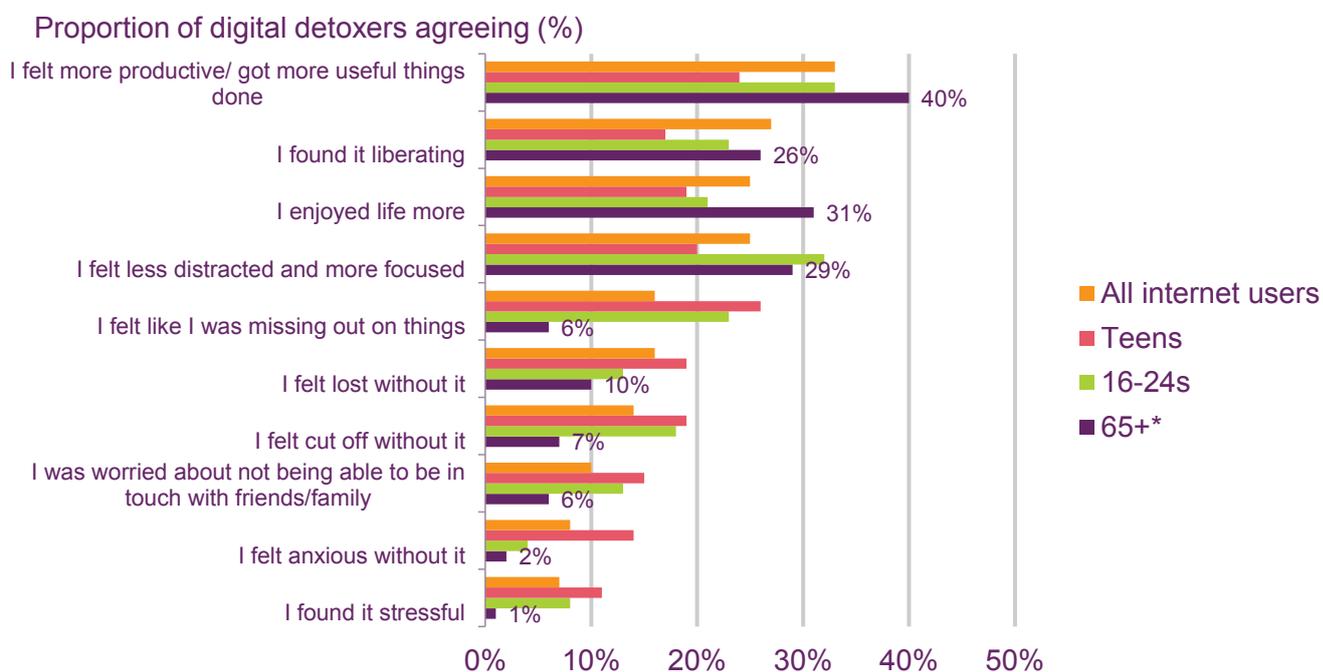
When we asked internet users about the specific ways in which they had tried to reduce their online time, a quarter (24%) had cut down the amount of time spent generally browsing online, while a fifth (20%) had made a conscious effort to reduce the amount of time spent on social media. The same proportion reported attempting to replace an online activity with its physical counterpart by 'making a conscious effort to go to the shops rather than shopping online'.

Although in much smaller proportions, others are taking more radical steps: 4% have downgraded a mobile data package, 3% have swapped a smartphone for a non-smartphone and the same proportion again has downgraded their internet package.

### Most 'digital detoxers' viewed their experience in a positive light

When asked how they felt when they went without the internet, the positives far outweighed the negatives. For example, a third (33%) of those who had had a web detox said they felt more productive or got more useful things done, while around a quarter agreed that they found it 'liberating', they 'enjoyed life more', or felt 'less distracted and more focused'. Smaller proportions of respondents reported having negative experiences; 15% felt lost, and 8% felt anxious without the internet.

**Figure 1.29** How 'digital detoxers' found the experience



Source: Ofcom research 2016

Base: All who have had a web detox at Q.F1A (All: 634, 16-24: 141, 65+: 70, teens: 213)

Q.F1D When you last purposely spent any time without the internet, how did you feel?

\*caution: low base size

## Just over a third of internet users would not want to try a digital detox



The majority of people had not tried to have a digital detox, but we asked internet users whether this was something they might want to consider in the future. Overall, one in ten said they would like to do a digital detox, compared to 34% who said they would definitely not like to. A further 26% said they might like to.

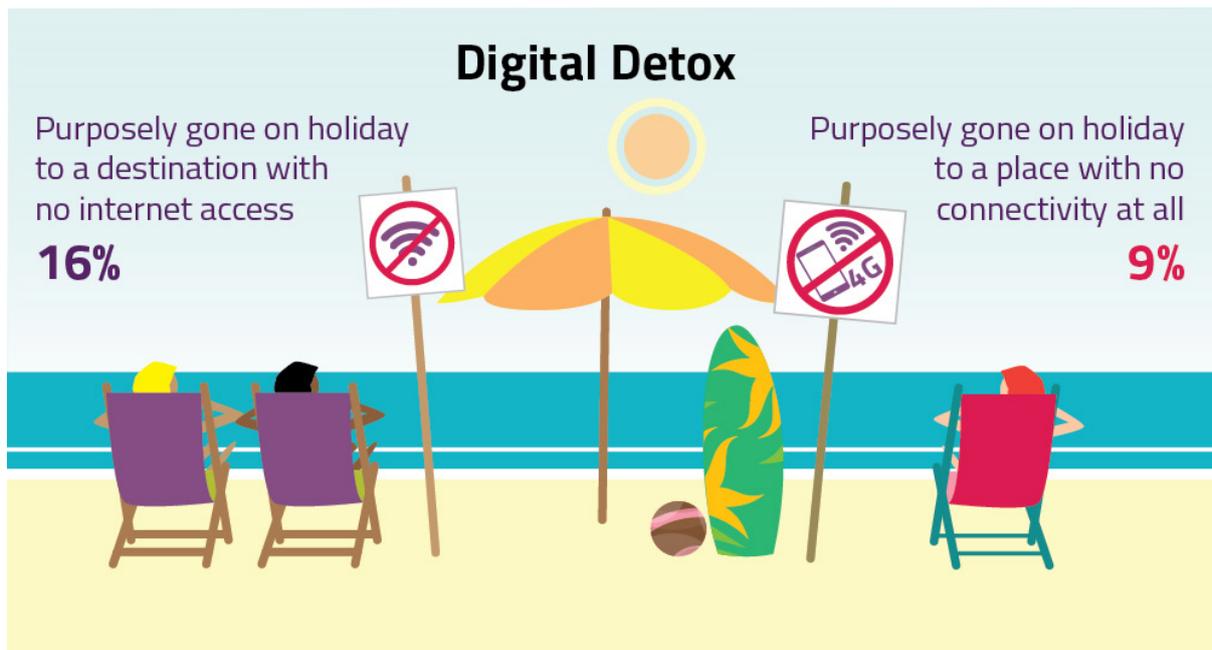
## Most people have rules to regulate their internet use

While some adults have undertaken a digital detox, others have moderated their internet use in a different way, by imposing rules on themselves and/ or their household. The most popular of these rules among all respondents is not using a phone or tablet at mealtimes, either at home or in a restaurant (36%). Around a quarter (24%) said 'I make sure I do something other than spending time online', while one in ten actively regulates the amount of time they spend online. Interestingly, young adults (aged 16-24) were more likely to say that they only allowed themselves a certain amount of time online (15% vs. 10% of all adults), perhaps due to that group's higher internet use.

Nearly eight in ten (77%) parents said they imposed rules on their children about when they can use devices and the internet. Reflecting the most popular rules that adults impose on themselves, the most common ways adults control their children's technology and internet use is by ensuring that they do something other than spending time online (40%) and by not allowing mobile phones or tablets to be used at mealtimes (40%).

We also asked the teens whether their parents had ever banned them from using, or had taken away, devices, or limited the amount of time they could spend on various online activities. Overall, six in ten (61%) teens who owned a device said this had happened to them, while a third (34%) said it had happened with a smartphone, and around a quarter with a games console (27%), a tablet (25%), or a PC/laptop (24%).

## Some people are now using their holidays as a way to deliberately disconnect



In recent years there has been an increase in demand for digital-free holidays - whereby guests can spend their time unconnected (i.e. have no phone or internet access).

Three in ten (30%) respondents had done a holiday digital detox of some form, and this included 16% who had deliberately gone on holiday to a place where there was no internet access and 13% who had purposely gone on holiday and left their phone at home. A smaller proportion of people (9%) had gone on holiday to a place where there was no connectivity at all (i.e. neither mobile phone nor internet access).



# 1.6 A forward look: spectrum, innovations and technology

## 1.6.1 The future of spectrum

'Spectrum' is the airwaves over which all wireless communications operate, and Ofcom is responsible for its management. Mobile phone networks, TV and radio broadcasting, wireless internet, sat-nav, air traffic control, and the emergency services are just some of the services that use spectrum.

In this section, Philip Marnick, Ofcom's Group Director, Spectrum, discusses how the increased take-up of devices and use of services affects the allocation of spectrum, and considers what the next generation of services that require the use of spectrum are likely to be.

Philip is responsible for setting and implementing Ofcom's strategy for managing spectrum, which includes clearing, awarding and licensing it. He has 30 years' experience in wireless communications and joined Ofcom from industry. He has worked in the wireless industry almost his entire career.

### **Spectrum – past and present**

Spectrum is something you cannot see or touch, but it is the key ingredient that enables almost everything we do: opening our cars, the radar that keep aeroplanes safe as they take us on holiday, through to the mobile phones we use to keep in touch.

Heinrich Hertz was the first to prove, in the 1880s, that radio waves could be transmitted between two points. However, he did not believe it had any practical benefit. How wrong could he be? His discovery is central to our modern life, and units of radio frequency are named after him.

We have made a lot of progress since Hertz made his discovery and now so much of what we do – the way we communicate and entertain ourselves – uses wireless communication. For example, the roll-out of 4G mobile services has continued this year, and they are now available to almost 98% of UK premises. Take-up of 4G services has increased by 18pp, to reach almost half of the population. This has led to greater connectivity while on the move, and thanks to technology, including wireless technology, and multi-tasking, 16-24 year olds are now able to cram 13 hours 11 minutes of media and communication activity into just under 9 hours.

Even the humble radio – for so many years the bedrock of entertainment – has continued to evolve as more than half of households have digital radios (DAB).

### **Ofcom's role in managing spectrum**

One of Ofcom's key jobs is to manage the UK's spectrum to enable existing services to grow and new services to develop and come to the market. We often hear about the demands for more spectrum to support the increasing demand for mobile data, which is expected to increase by as much as 31 times by 2020 in Western Europe.

Growing smartphone take-up is a key driver of mobile data demand. Seventy-one per cent of people have a smartphone, and our *Digital Day* research shows that for 16-24 year olds this

is the device they use the most. People are also using more data-heavy applications on their devices – making video calls and streaming video and audio.

As most spectrum is occupied, we have to consider moving one service to make way for another; for example, squeezing up TV to make more spectrum (700MHz) available for mobile. As part of this, and given the high levels of use of wireless microphones, we are now enabling these to share with aeronautical services. We are already looking at the spectrum needs of 5G, which will provide higher capacity networks that are more responsive and can offer faster speeds. This will open up a new range of frequencies in the millimetric bands – an area of spectrum in which satellites provide TV, radio navigation services, support for emergency services, and broadband for very remote locations, on land, in the air and at sea.

The role of Ofcom is to look at how all services can work together without causing interference, but still have the spectrum they need to deliver. It is like a three-dimensional jigsaw where the picture is always changing. Spectrum is an area where international collaboration is essential; radio waves do not stop at international borders, so countries need to agree which services particular frequencies are most likely to be used for.

### **The future for spectrum: next generation services**

Over the next few years we will hear a lot about ‘next generation services’ as an increasing number of the things that we use to support our lives go online. This will require access to spectrum. Some may be able to share spectrum, but others may need their own exclusive spectrum, as interference or delay could cause serious problems.

Examples of next generation services are:

- **Connected cars** – within the next ten years, cars will be able to communicate, both with other cars and with sensors on the road that will provide information on weather and road conditions, as well as the actions of other vehicles that the driver may or may not have seen. This information will help us drive (or maybe the car will drive itself), reducing the probability of accidents and improving fuel efficiency. Connected cars will also allow the car manufacturers to monitor the performance of the car, provide updates, and provide entertainment, communication and navigation services. This will require different types of spectrum – some very short range and others with high bandwidth. It will need to be harmonised spectrum, as cars are manufactured for the global market and, of course, travel across national borders.
- The supply of energy will be increasingly controlled and monitored wirelessly. Today, **smart meters** are being rolled out across the country – many of these are connected to the network by wireless technologies. The monitors in our homes and the new thermostats use licence-exempt spectrum to communicate. The energy companies make extensive use of telemetry (automated data collection and transmission) to monitor how energy is flowing and to support the many new types of small generators that are capable of supplying electricity to the grid. Wireless technologies will be used to manage supply and to control the generators that provide the electricity we use. While smart meters and the information we see in our homes can use licence-exempt spectrum, many argue that the control of electricity power stations and the grid – which moves electricity around the country – need a dedicated secure wireless network. This may require its own dedicated spectrum.
- For ships at sea, aircraft, and people in very remote locations, **satellites** have become increasingly central to supporting communications. Like everywhere else, there is increasing demand for more access, and higher-speed access, to the internet. This has driven demand for satellites that can deliver significantly more

capacity. Technology developments are also enabling smaller satellites; some people are talking about delivering networks of thousands of satellites, orbiting the earth at low altitude and offering broadband connectivity. These could provide internet access to remote areas of the world and, as they pass overhead, services in more developed areas as well. These new satellite networks are developing the capability to 'hand over' connections between satellites, as each satellite passes overhead. These new satellite technologies require Ofcom, working with its international partners, to carefully plan the spectrum needed and to ensure that the international rules allow the effective use of this scarce resource.

With the development of new mobile technology such as 5G, we will hear about millimetric waves, and new technology such as 'massive MIMO' (multiple input, multiple output), which comprises lots of aerials, all very small, that multiply the capacity of a wireless link. These developments are essential to deliver the faster speeds and higher capacity we will all need. But with all this - we must never forget that if you want to get into your car, you need your wireless key to work!

### **1.6.2 Innovations and technology**

In this section, David Harrison, Ofcom's Director of Technology Strategy, sets out his views on technical innovation and what benefits new and forthcoming services are likely to bring.

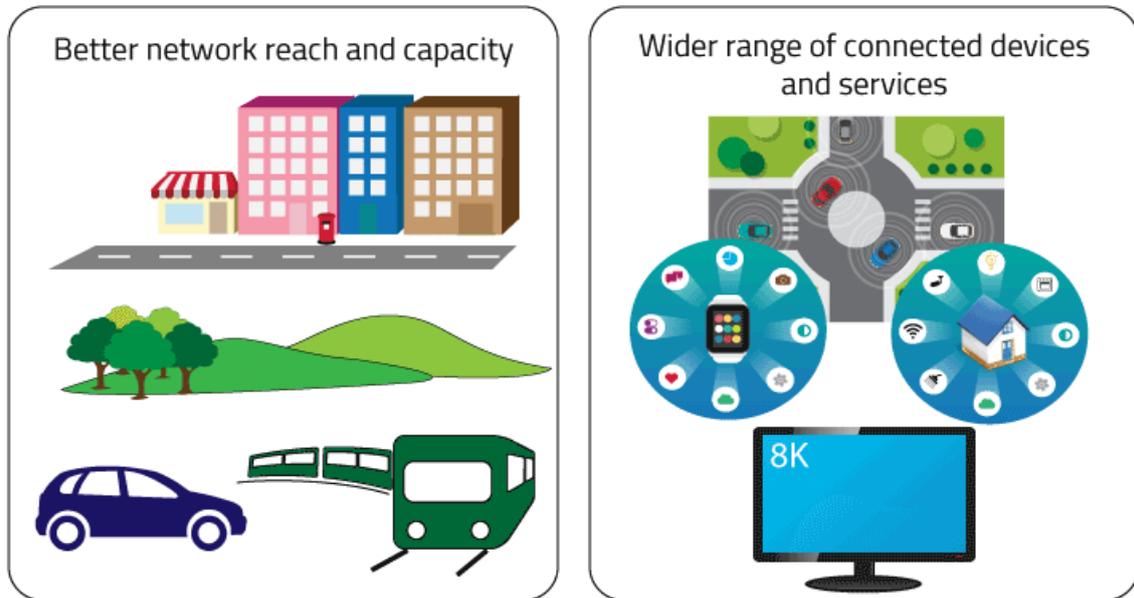
David is responsible for leading Ofcom's technical research programme and supporting Ofcom policy development across a wide range of areas including: the internet of things, fixed and mobile availability and performance, unlicensed Wi-Fi spectrum, future use of UHF spectrum, network neutrality and next generation broadband access.

Before joining Ofcom, David worked for the Independent Television Commission, where he held the position of Deputy Director of Technology, and before that led the high-frequency research and development activities in Thomson Multimedia, based in France.

#### **Technical innovation continues to improve network connectivity and performance**

A combination of technological innovation and investment in network infrastructure is leading to fixed and mobile broadband being available to more areas and more people. This is helping to extend reliable internet access to more consumers and businesses, some of whom currently have poor, or even no connectivity. These developments are, in turn fostering further innovation in online services including the Internet of Things (IoT), and ultra-high definition (UHD) television.

## Technology innovation



### Staying connected

The ability to remain connected wherever we are is an increasingly important part of our daily lives, whether for contacting friends and family or for accessing online information and entertainment services on the move. For some it is about having the fastest connection, so that files can be downloaded or uploaded quickly. For others, it is about having coverage wherever they live or work. Technology is evolving to ensure better connectivity for all.

Improving mobile network technologies are helping meet these expectations. New 4G mobile networks are able to operate with weaker signals and deliver higher speed connections, helping to extend coverage further into rural areas as well as providing the additional capacity needed to meet the demands of large numbers of users in cities and towns. Next generation 5G mobile technology is also under development; this aims to provide a number of future improvements at the start of the next decade, including higher speeds; the capacity to support the growing use of mobile data and higher resolution mobile video services; better and wider coverage; lower battery use; and reduced transmission delays to better support real-time applications such as games and automated transport control systems.

New voice-over-Wi-Fi technology is enabling consumers to use their Wi-Fi routers to improve indoor mobile coverage for themselves.

The performance of fixed broadband networks is also improving, as more fibre optic cables are extended closer to consumers and businesses. This has helped increase the average UK fixed broadband connection speeds from 6.2Mbit/s to 28.9Mbit/s in the five years to 2015. Many of the homes and businesses with a direct fibre connection can now access ultrafast connection speeds (above 300Mbit/s), improving the experience of using online services and enabling the transfer and back-up of large digital files in near-real time.

In addition to delivering very high speeds, technology is evolving to connect those that currently cannot receive reliable broadband services. Last year we reported that around 2.4 million homes and small businesses could not receive an internet service with speeds in excess of 10Mbit/s and it is important that these consumers are not left behind. As well as wider optical fibre deployment, new extended-reach technologies are helping to deliver higher-speed connections over existing telephone lines.

Ofcom's mobile coverage and fixed broadband checker provides an easy way for consumers and businesses to check the fixed broadband connection speeds available in different postcodes, and 4G and other mobile network coverage, at <http://maps.ofcom.org.uk/check-coverage>.

In addition to technical innovations, there are a range of other initiatives aimed at improving broadband coverage. For mobile broadband services these include the inclusion of coverage obligations in mobile licences, and making more low-frequency spectrum available to deliver better wide-area coverage. For fixed broadband, the Government is considering how to ensure that all UK households will be able to access a connection with a speed of at least 10Mbit/s by 2020.

### **An expanding range of new services**

Looking further ahead to the next decade, technology innovation is set to enable us to move closer to a world in which we can remain connected wherever we are, with no apparent capacity constraints; with intelligent software automatically helping select for us the best available networks connection and services.

This improving connectivity, combined with new technologies that allow video to be sent using less capacity, are enabling the delivery of more lifelike immersive video services. For example, the next generation of 8K TV will offer even more detail than 4K televisions. These higher-definition formats, combined with 360° video camera developments, wrap-around screens and wearable gaming devices will help provide consumers with a greater sensation of 'being there' when watching future TV and video services. Higher-resolution video conferencing services, together with improving immersive screen technology are also set to provide a more realistic remote working experience.

Internet-connected TVs, mobile, portable and wearable devices will make it easier to watch a much wider range of content, whenever we want to, from anywhere in the world. Further, internet connectivity is being embedded into more consumer products supporting the development of the IoT. This has the potential to bring a wide range of future benefits to consumers. For example, at home, connected household appliances will offer the potential to enable the better use of electricity and to improve security. Connected cars are set to improve journey times, servicing and maintenance advice, and road safety, through the use of collision avoidance technology. In addition, connected cars will provide access to a wide range of streamed music and other online services.

### **Regulation will help to support the benefits of technology**

Effective and flexible regulation is essential if consumers and UK businesses are to get the best possible benefits from future technological innovation. To help achieve this, Ofcom will continue to ensure that the way we regulate is underpinned by a strong understanding of current and emerging technologies. We will continue to liaise closely with industry and international standards bodies to keep abreast of the scope and impact of the latest technical developments, as well as commissioning our own technical research in key areas. The findings of previous technical research studies can be found here:

<http://stakeholders.ofcom.org.uk/market-data-research/other/technology-research/> .





# The Communications Market 2016

## **2 Television and audio-visual**

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## 2.1 Key market developments in TV and audio-visual

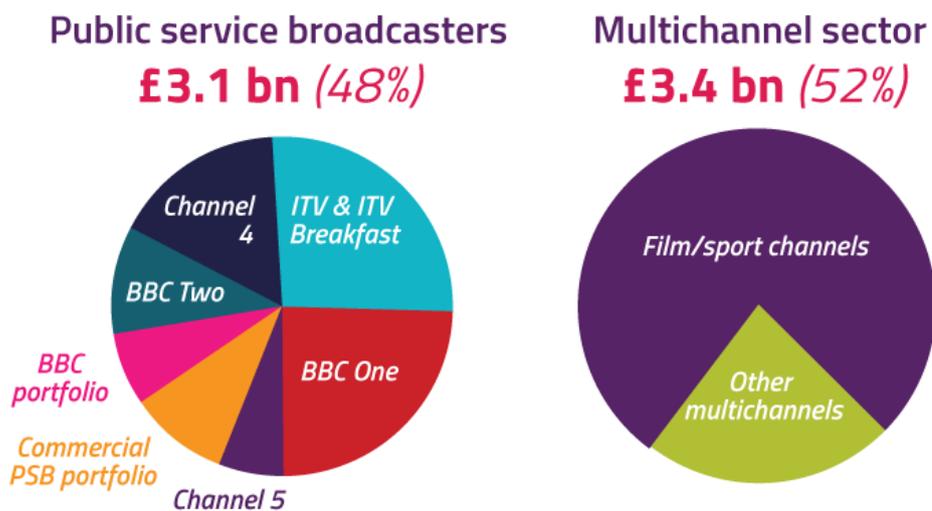
### 2.1.1 Sector overview

Time spent watching broadcast TV continued to decline in 2015, but more slowly than the accelerated decline of the last two years. The average 3 hours 36 minutes a day that people (aged 4 and above) spent watching conventional TV in 2015 was 26 minutes a day less than five years previously. Behind the headline comparison is a growing generational divide; watching broadcast television among 16-24s has had the steepest decline (27%) since 2010 followed by children (26%).

These changes in viewing are happening in the context of a rapidly changing viewing landscape. The widespread availability of on-demand services on a range of devices allow viewers to watch programmes and films in an increasingly convenient and flexible manner. Ofcom's Digital Day research reveals that among 16-24 year olds, time spent watching live television has declined to 36% of total viewing time, while free, paid on-demand and short-form video now represent around half of this age group's viewing.

These changes are happening at a time of record TV industry revenues of £13.6bn in 2015, led by subscription revenue, which exceeded £6bn among pay-TV providers, and net advertising revenues over £4bn across the wider commercial TV sector. Never has more been invested in content than in 2015; the £6.5bn of spend on network TV programmes was driven by record levels of investment in premium sports content by both Sky and BT.

Figure 2.1 Spend on network TV programmes: 2015



Source: Ofcom/broadcasters. Note: Figures expressed in nominal prices. Figures do not include spend on nations' and regions' output. BBC portfolio channels includes BBC Three, BBC Four, BBC News, BBC Parliament, CBBC and CBeebies (but not BBC HD). Commercial PSB portfolio channels include, ITV2, ITV3, ITV4, CITV, ITVBe, ITV Encore, ITV Breakfast 2, E4, More 4, Film 4, 4Seven, Five USA, 5\* and Spike (and their '+1' channels) 'Other multichannels' include all genres (excluding sports and films). Programme spend comprises in-house productions, commissions from independents, acquired programmes and repeats (originations and acquisitions).

**Figure 2.2 Industry metrics**

| UK television industry                                    | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
|---|-------|-------|-------|-------|-------|-------|
| Total broadcast TV industry revenue (£bn)                 | 11.8  | 12.4  | 12.5  | 12.8  | 13.2  | 13.6  |
| Proportion of revenue which is BBC income allocated to TV | 22%   | 21%   | 21%   | 20%   | 21%   | 19%   |
| Proportion of revenue generated by advertising            | 30%   | 29%   | 28%   | 29%   | 29%   | 30%   |
| Proportion of revenue generated by subscriptions          | 43%   | 44%   | 44%   | 46%   | 45%   | 45%   |
| Total online TV industry revenue (£m)                     | 180   | 238   | 379   | 574   | 795   | 976   |
| Broadcaster share of total display advertising spend      | 43%   | 43%   | 43%   | 43%   | 43%   | 43%   |
| Spend on originated output by 5 main PSB channels (£bn)   | 2.5   | 2.5   | 2.6   | 2.5   | 2.6   | 2.6   |
| Spend on network content by UK broadcasters (£bn)         | 5.4   | 5.5   | 5.6   | 5.8   | 6.4   | 6.5   |
| Digital TV homes (% all households)                       | 92%   | 94%   | 96%   | 95%   | 93%   | 95%   |
| Traditional pay-TV subscriptions                          | 14.4m | 14.7m | 15.0m | 16.0m | 17.1m | 17.9m |
| Minutes spent watching TV per day (per person aged 4+)    | 242   | 242   | 241   | 232   | 220   | 216   |
| Share of the main five PSB channels in all homes          | 55%   | 54%   | 52%   | 51%   | 51%   | 51%   |
| VoD usage (% of adults 15+)                               | 27%   | 43%   | 38%   | 51%   | 57%   | 59%   |

Source: Ofcom/broadcasters/IHS/Advertising Association/Warc/BARB/GfK. Note: Expressed in nominal terms. BBC income allocated to TV includes the proportion of the licence fee that goes to S4C. Broadcaster share as a proportion of total display advertising spend excludes direct mail and classified ads and is based on Advertising Association/Warc Expenditure Report. The AAWarc data are net of discounts, and include agency commission, but excludes production costs. Spend on originations includes spend on nations and regions programming (not Welsh or Gaelic language programmes but some Irish language). Traditional pay-TV subscriptions are from Sky, Virgin TalkTalk and BT and are provided by Enders Analysis. Sky figures include Now TV, ROI and overseas business subscriptions. TV viewing based on BARB analysis of viewing to scheduled TV programmes on TV sets up to seven days after first broadcast. After DSO in October 2012, all homes were required to have digital TV. From 2013, data refers to the proportion of UK homes that had a working TV set as defined in BARB's Establishment Survey. Data refers to Q4 of each year. BARB changed the methodology for defining a TV set home from Q4 2015 and data comparisons to previous years should be treated with caution. VoD usage figures provided by Kantar Media – TGI.

We begin by looking at key market developments in video on demand in the UK, which reached about six in ten UK adults at the end of 2015.

### 2.1.2 Video on demand in the UK

The advent of video on demand (VoD) has caused a noticeable change in consumption habits and behaviour among UK audiences. VoD has given audiences a much broader choice not only in how to watch audio-visual (AV) content (such as via free or paid-for services) but also what to watch – back catalogues of television or film programmes, content exclusive to a particular service, or original content made by the service itself.

The growth in take-up of internet-enabled devices (see section 1.1) helps to explain the growth in adults' use of VoD, as does the increased availability and take-up of superfast broadband and 4G mobile services.

This next section focuses on take-up and use of VoD services in the UK.<sup>14</sup> Within this, we explore trends observed in Ofcom's *Digital Day 2016* research, which has identified an increase in the proportion of claimed viewing of paid-for on-demand services, especially among 16-24s.

## **Definitions**

### **Video on demand (VoD)**

Unlike traditional broadcast television, VoD services make AV content available for immediate consumption, unrestricted by a linear schedule. VoD content can be streamed directly or downloaded in advance, on various devices and platforms.

VoD services can be distinguished by the type of business model they operate with: either providing free video-on-demand content or paid-for on-demand content. However, some providers do cut across both business models, such as the BBC with iPlayer and the BBC Store.

The traditional pay-TV operators<sup>15</sup> also offer VoD services to their subscribers, with services such as Sky Go and Virgin On Demand providing access to on-demand content.

### **Free video on demand**

This is content that can be viewed without payment. Services currently available in the UK that provide free-to-view on-demand content include those from the public service broadcasters: BBC iPlayer, ITV Hub, All4 and My5.

### **Paid-for video on demand**

There are various types of business model that can be categorised under the wider term of paid-for video on demand:

#### ***Subscription video on demand***

Under a subscription contract, consumers pay a fee (usually monthly) in order to access the service. Some SVoD services offer free trials, either through their own promotions or through commercial partnerships with TV or telecoms operators. Examples of SVoD services in the UK are Netflix, Amazon and Disney Life.

Sky's Now TV service also offers VoD content made available via a monthly subscription (e.g. the *Entertainment monthly pass* and the *Sky Cinema*<sup>16</sup> *monthly pass*) as well as access to a selection of Sky's live TV channels.

#### ***Pay-per-view***

This is a service offering single viewings of a specific film, programme or event (such as live sports), provided to consumers for a one-off fee. Sky Box Office is an example of a service that offers pay-per-view content.

---

<sup>14</sup> The analysis in this section primarily focuses on long-form professional VoD services and content.

<sup>15</sup> Throughout this particular section, pay-TV operators include traditional pay-TV services such as Sky, Virgin, BT and TalkTalk.

<sup>16</sup> Sky rebranded Sky Movies as Sky Cinema in July 2016.

## Rental

Under a rental model, consumers pay a single one-off fee to access a particular piece of content. Rented content is available for consumption for a limited period of time and the consumer can watch that content as many times as they want within the rental period. Examples of services offering content for rental are Wuaki TV, Sky Cinema, TalkTalk TV and Sainsbury's Entertainment.

## Download to own

This is a service which makes digital content available for purchase. Services which offer content for purchase include iTunes, BBC Store, Amazon and Sky Store.

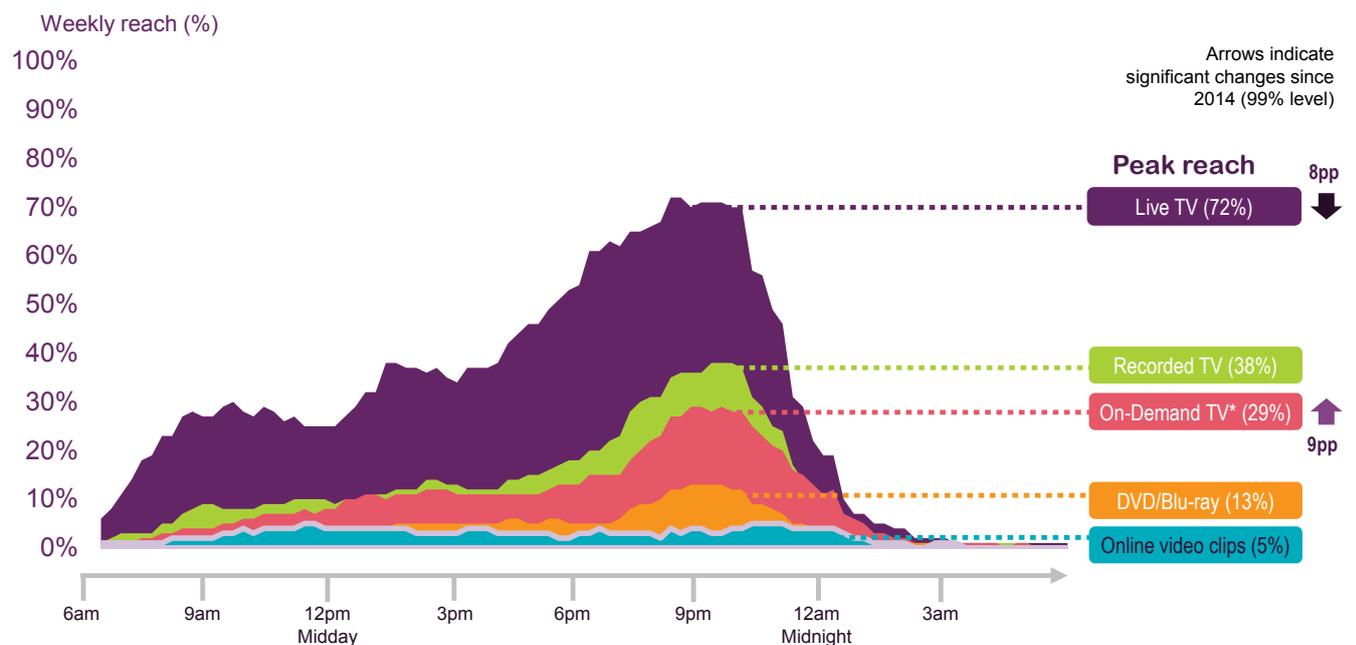
### The largest peak audience of viewing on-demand content has increased since 2014

Findings from Ofcom's *Digital Day 2016* study found that watching live TV was the most popular viewing activity among UK adults in 2016. It attracted its largest audience between 8 and 8.30pm, with 72% of adults watching live TV during this period. However, this was lower than live TV's biggest audience in 2014 (down by 8pp).

In contrast, on-demand content (which includes viewing to free<sup>17</sup> and paid-for<sup>18</sup> on-demand) attracted a higher peak audience in 2016 – up 9pp to 29% of UK adults between 8.30 and 8.59pm.

The time of highest viewing, and the reach of watching activities, varied by age group. Live TV and on-demand viewing attracted a similar proportion of 16-24s; the highest reach was 58% for both viewing activities. But there was a stark difference in the highest reach for live TV and on-demand viewing among the over-65s, at 91% and 10% respectively.

**Figure 2.3 Weekly reach of watching activities, by time of day**



<sup>17</sup> Free on-demand includes on-demand/catch-up TV or films (free) e.g. BBC iPlayer, All4, Sky and Virgin on Demand

<sup>18</sup> Paid-for on-demand includes downloaded or streamed digital TV or films e.g. Amazon Instant Video, Netflix, iTunes, Disney Life, Blinkbox (now renamed TalkTalk TV as of early 2016).

Source: Ofcom Digital Day 2016. Base: Adults aged 16+ (1512)  
 Adult diary: Chart shows the proportion of adults who recorded each watching activity (D) at each time slot across a week.  
 \*On-demand TV includes paid and free on-demand

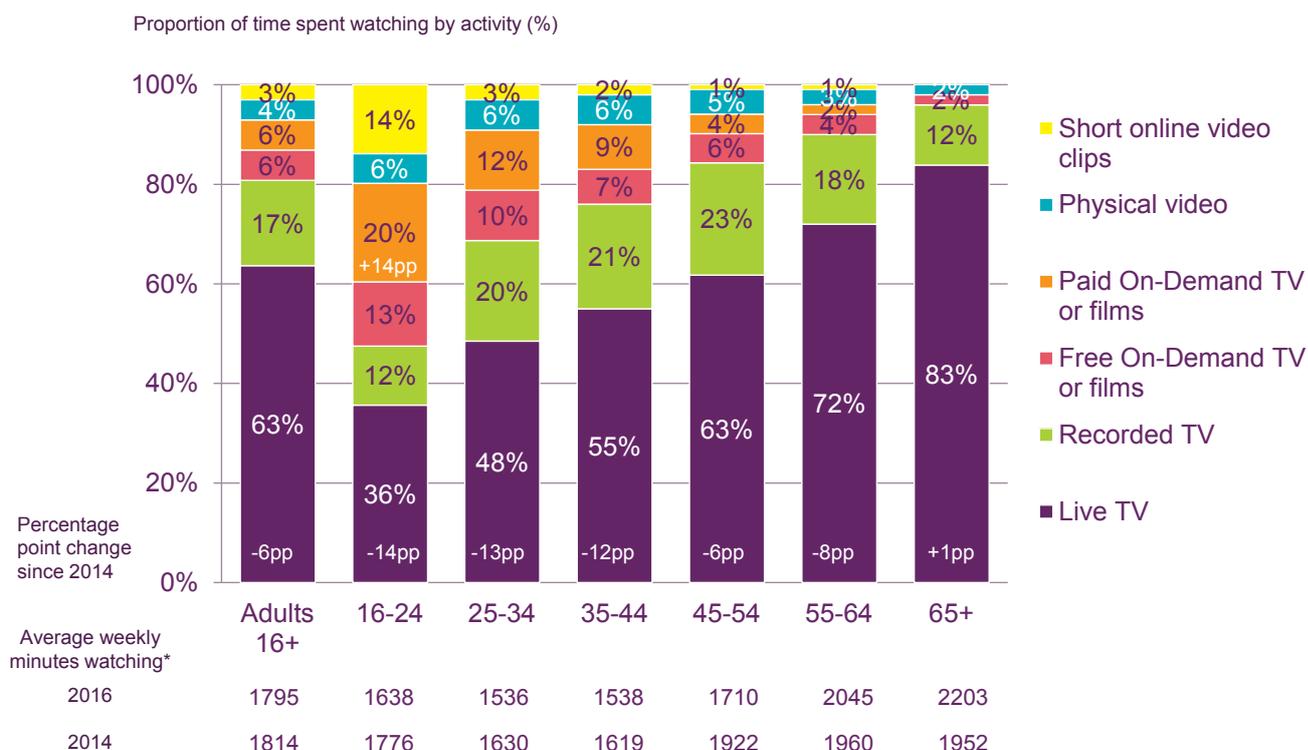
### 16-24s prefer recorded, on-demand and online content to live broadcast TV

Among those who recorded their viewing activity, the proportion of time spent watching live TV fell by 6pp, from 69% of all viewing minutes in 2014 to 63% in 2016. Despite this decline, live TV remains the most popular viewing activity in 2016. Recorded TV accounted for 17% of all adults' claimed viewing time, while an equal proportion of their time was spent viewing free on-demand and paid-for on-demand services (both 6%). Claimed viewing time for DVDs/Blu-rays and online video clips was 4% and 3% respectively among all adults.

Watching behaviour varied markedly across the different age groups. The 16-34s claimed that less than half of the viewing time was spent watching live TV, while over-35s spent more than half of their total viewing time watching live TV. However, all adults under 65 watched less live TV in 2016 than they did in 2014.

The 16-24s watched more recorded, on-demand and online content than live TV in 2016 (59% vs. 36%). The claimed time spent watching live TV among the 16-24s has fallen by 14pp since 2014, to 36% of total viewing in 2016. By contrast, viewing of paid-for on-demand services has increased by 14pp since 2014, and accounted for 20% of this age group's total viewing time in 2016. While there is an indication that take-up of VoD services slowed in 2015 (see Figure 2.5), the time spent using such services by the 16-24s appears to have increased.

**Figure 2.4** Proportion of time spent watching, attributed to activities, by age group



Source: Ofcom Digital Day 2016. Base: Adults aged 16+ (1512) 16-24s (129) 25-34s (189) 34-44s (282) 45-54s (299) 55-64s (259) 65+s (354)  
 Adult diary: Chart shows the proportion of all watching time (B2) attributed to each activity (D) by age group.

\*The average weekly minutes figure is among those who did any watching activity across their diary week and also includes simultaneous activity

## Almost six in ten UK adults used a VoD service in 2015

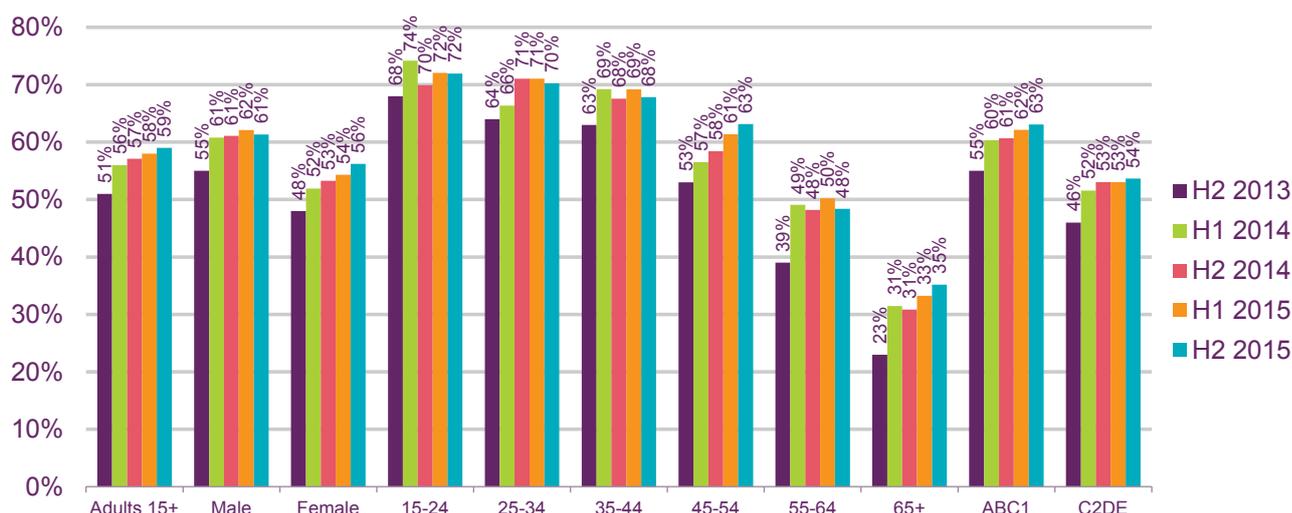
Six in ten (59%) adults said they had used a VoD service in the past 12 months, up by 2pp since 2014. However, while adults are still taking up VoD services, the rate of take-up has slowed in recent years. Since 2014, the proportion of all adults claiming to have used at least one VoD service in the past 12 months has increased by 1pp each six months. This is a markedly slower growth rate than the 6pp increase between 2013 and 2014.

Use of VoD is greatest among adults under the age of 45, with around two thirds claiming to have used such services in the past 12 months. The 15-24s are still the greatest users of VoD, at 72%, up 2pp since 2014. However, as seen among all adults, the rate of VoD take-up here also appears to be slowing, and even plateauing, among some of the younger age groups. For example, the 25-34s' use has remained at around seven in ten since 2014. This contrasts with the previous growth in take-up of 6pp between 2013 and 2014. Among 35-44s and 55-64s, use is unchanged year on year (at 68% and 48% respectively).

However, there are indications that use of VoD is still growing among older audiences. Of all the age groups, the 45-54s' use of VoD has grown the fastest since 2014; up by 5pp to 63%. Growth was second fastest among the over-65s, up by 4pp since 2014 to 35%.

**Figure 2.5 Reach of VoD services by age, gender and socio-economic group**

Proportion watching VoD services in the past 12 months (%)



Source: Kantar Media – TGI

Base: GB adults aged 15+. H2 2013 n=12570, H1 2014 n=11657 H2 2014 n= 12849, H1 2015 n= 11972, H2 2015 n=12310

Note: For H1 2014, 'in scope' services comprise of Channel 4.com/4oD, BBC iPlayer, Blinkbox, BT TV, Demand 5, ITV.com/ITV Player, Netflix, Now TV, Sky, TalkTalk, Virgin, You View. Amazon Prime was added to the 'in scope' services in H2 2014.

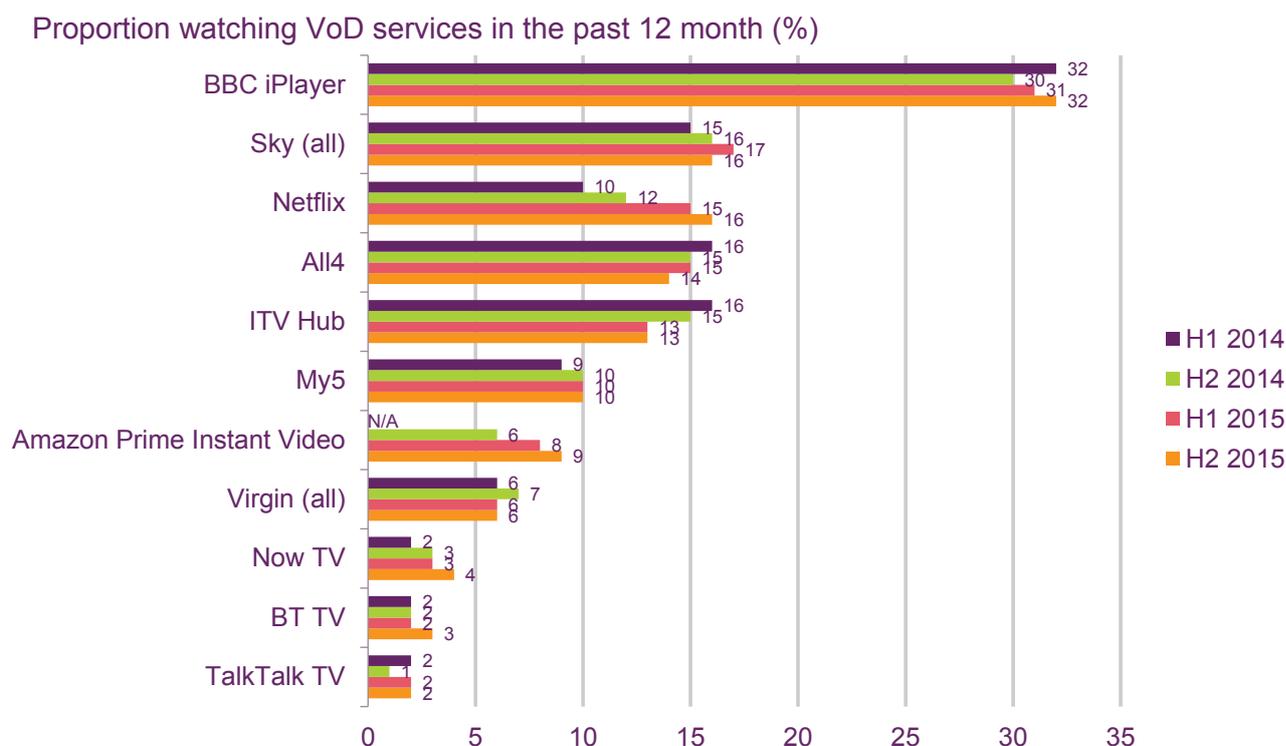
Note: ITV Player was rebranded as ITV Hub in November 2015. 4oD was rebranded All4 in March 2015. BlinkBox was renamed TalkTalk TV in early 2016

## BBC iPlayer remains the most popular VoD service in the UK

BBC iPlayer remains the most popular service, with 32% of adults using the service in the 12 months to the end of 2015 (up by 2pp since 2014). Video on demand from Sky<sup>19</sup> remains the most popular type of VoD from a pay-TV operator at 16% of adults (unchanged from 2014).

Among the non-broadcaster services, Netflix is markedly the most popular in the UK, with 16% of adults claiming to have used it in the past 12 months in the second half of 2015. This was a 4pp increase on 2014 - the fastest year-on-year growth experienced by any service - while data from Ofcom's *Digital Day 2016* study suggest further growth in the early part of 2016.<sup>20</sup>

**Figure 2.6 Reach of selected VoD services over the past 12 months**



Source: Kantar Media – TGI

Base: GB adults aged 15+. H1 2010 n=12226, H1 2013 n=11853, H1 2014 n=11657 H2 2014 n=12849, H1 2015 n=11972, H2 2015 n=12310

Note: LoveFilm was rebranded as Amazon Prime Instant Video February 2014. 4OD was rebranded as All4 in March 2015.

### 2.1.3 The growth of paid-for VoD services

This growth in the take-up of paid-for VoD is primarily driven by the take-up of SVoD services: Netflix is the most prominent driving force. Alongside this growth in take-up, there is a correlating increase in the amount of time spent watching these services, as the results from Ofcom's *Digital Day 2016* study show.

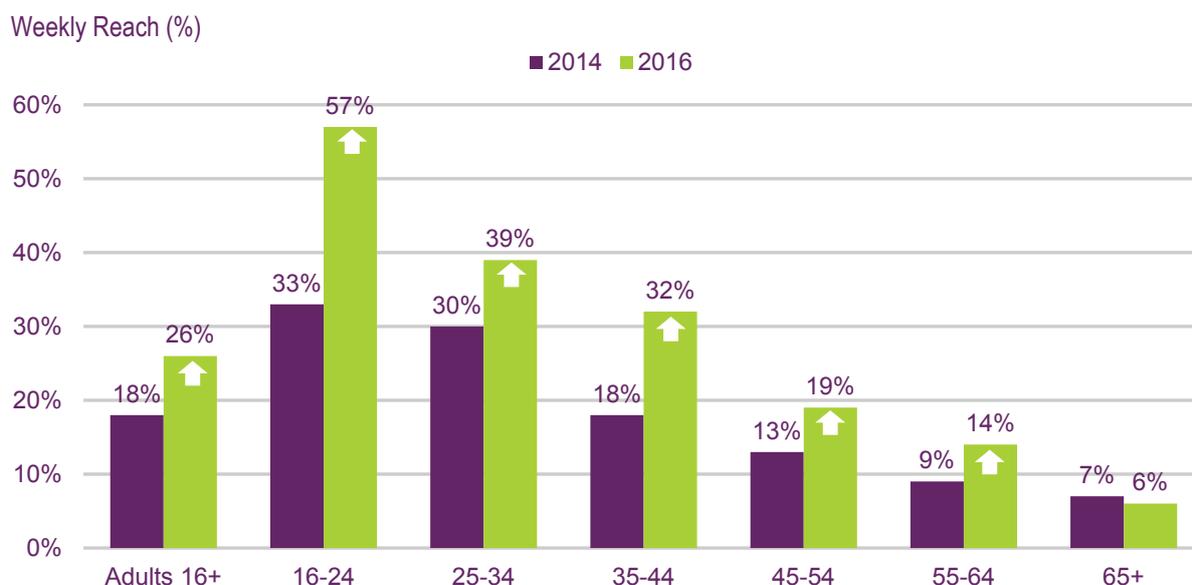
Since 2014, all adults' viewing of such services has increased by 8pp to 26% in 2016. All adults under 65 have also increased their viewing of paid-for on-demand content. Watching this content was markedly higher among 16-24s than among any other age group in 2016, at

<sup>19</sup> Sky includes Sky on Demand/Anytime, Sky Box Office, Sky Go and Sky Store.

<sup>20</sup> See Figure 2.8 below

57% (up by 24pp since 2014). The younger audiences can be seen to have driven the growth in the reach of paid-for on-demand services among all adults.

**Figure 2.7 Weekly reach of paid-for on-demand, by age group: 2016 vs. 2014**



Source: Ofcom Digital Day 2016

Adult diary: Chart shows the proportion of adults who recorded activity (D) at any point across their diary week.

Base: 2016: Adults aged 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354);

2014: Adults aged 16+ (1644), 16-24 (101), 25-34 (225), 35-44 (348), 45-54 (400), 55-64 (311), 65+ (259)

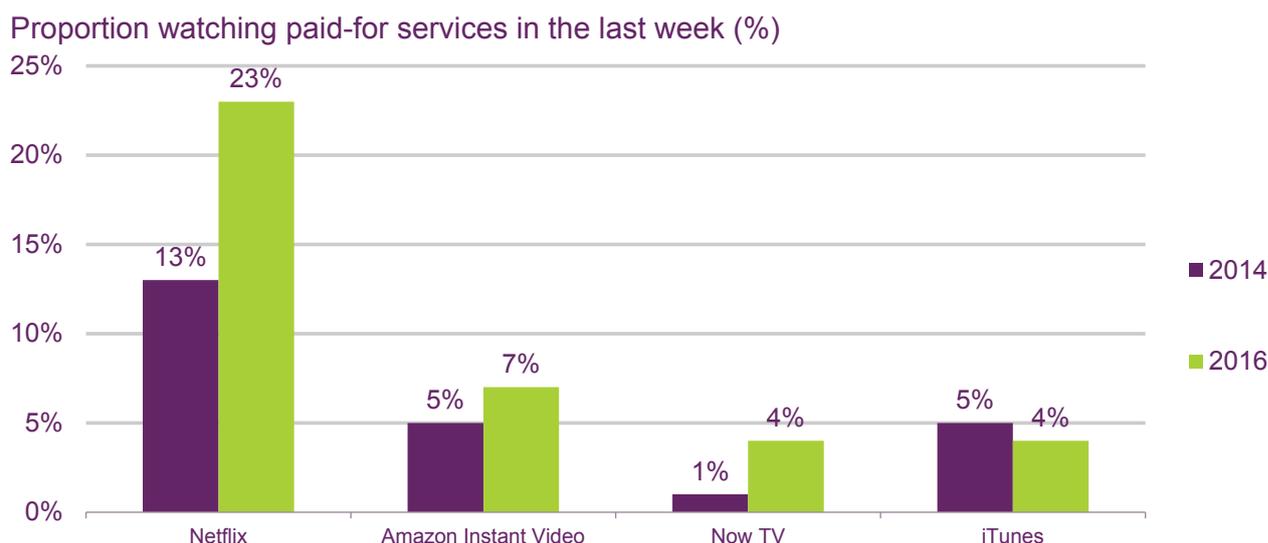
Note: Arrows show where figures have significantly increased at the 99% level since 2014

### Among those who watched paid-for on-demand content in 2016, Netflix was by far the most popular service

The increase in consumption of paid-for VoD was primarily driven by the popularity of subscription on-demand services, most notably Netflix.<sup>21</sup> Twenty three per cent of adults used Netflix in their diary week in 2016 (up 10pp since 2014). The difference between reach of Netflix and the second most popular VoD service, Amazon, is stark: 7% of adults used Amazon's VoD offering in their diary week in 2016 (up 2pp since 2014). Reach of Now TV has grown by 3pp; up from 1% to 4% in 2016.

<sup>21</sup> The results from *Digital Day 2016* were captured between February and April 2016 compared to Kantar Media - TGI, which was captured across the second half of 2015. The *Digital Day 2016* data also looks at weekly reach of services, as opposed to reach of services over the last 12 months and uses a different methodology which may explain why results vary across sources.

**Figure 2.8 Weekly reach of the most popular paid-for on-demand services**



Source: Ofcom Digital Day 2016

B2. Have you used any of the following paid-for services to stream or download films or (television) programmes in the last week?

Base: Adults aged 16+ (1512 in 2016, 1644 in 2014)

Note: Amazon Instant Video was LoveFilm Instant in 2014.

### 2.1.4 Behaviour and attitudes of SVoD users

This next section focuses on the behaviour and attitudes of users of streamed video on demand (SVoD) services; those that are delivered via the open internet (OTT) in the UK.<sup>22</sup> The data presented here have been provided by GfK's SVoD Tracker survey. This is a continuous online diary-based survey, designed to measure the consumption of content via OTT SVoD services in the UK. The services covered are Netflix, Amazon and Now TV.<sup>23</sup> According to the BARB Establishment Survey, there were more than 5 million households with a Netflix subscription in Q4 2015. The number of households taking up a subscription to Amazon exceeded 1.5 million, while 781,000 UK households subscribed to Now TV.<sup>24</sup>

#### Access to TV and film library content is the main reason why users decide to sign up to an OTT SVoD service

The key drivers identified for subscribing to a SVoD service in 2015 related to access to back catalogues of TV and film content. Similar proportions of Netflix users and Amazon users cited 'to access back catalogue of TV programmes' and 'to access back catalogue of movies' as reasons for subscribing to each respective service. Among Now TV users, access to the back catalogue of more recent films was the most frequently-cited reason for signing up to the service. This reflects Sky's deal with film studios, which enables the latest films to appear on Sky Cinema sooner than on other VoD services; Now TV offers access to this catalogue via its Sky Cinema monthly pass subscription option.

The variety of the reasons cited by SVoD users for subscribing to their respective service may indicate the differing content provided by each service. For example, 'to watch original

<sup>22</sup> 'SVoD users' includes those who are paying for a subscription to a service or are trialling a service.

<sup>23</sup> Now TV offers both a traditional SVoD service and access to a selection of Sky's live TV channels. GfK include Now TV as one of the services in its SVoD tracker.

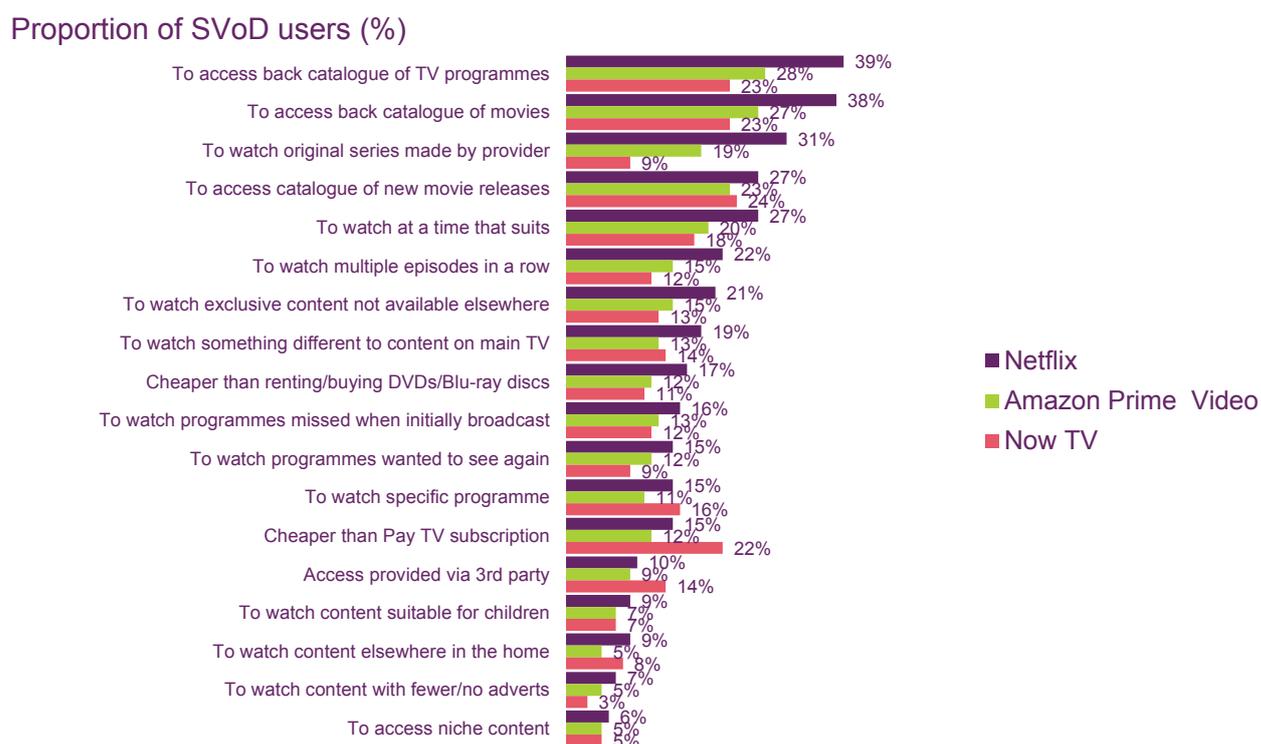
<sup>24</sup> BARB Establishment Survey, Q4 2015. Note: the number of Now TV subscriptions may be reported as higher by other industry sources.

*shows made by provider* was cited as a reason by nearly a third (31%) of Netflix users, compared to 19% of Amazon users and 9% of Now TV users.

Original content is a major area of investment for both Netflix and Amazon, and the availability of such content often forms the focus of their marketing communications. Netflix reportedly spent \$3.8m per episode on *House of Cards*, while Amazon's upcoming series *The Grand Tour* is reportedly the service's most expensive original series, at an estimated cost of \$6.9m per episode.<sup>25</sup> With this in mind, it is interesting that access to the back catalogues of TV programmes and films (which are refreshed and expanded at a faster rate than original content is produced) is cited more often than original content as a reason for subscribing.

Relatively few Netflix users and Amazon users reported that they took up their respective services because they were *'cheaper than a pay-TV subscription'* (15% and 12% respectively). However, more Now TV users (22%), than Netflix or Amazon users, claimed to have taken up the service for this reason.

**Figure 2.9 Selected reasons for signing-up/ using an SVoD service**



Source: GfK SVoD Tracker, Q4 2015 October-December 2015

EW1: Reasons for signing-up for/ using service

Base: Netflix users (n=2454), Amazon Prime Video users (n=1336), Now TV users (n=619)

Note: Users include those who either subscribe to or are trialling an SVoD service

### Most of the top ten most-watched programmes by UK SVoD users are US television drama or original content

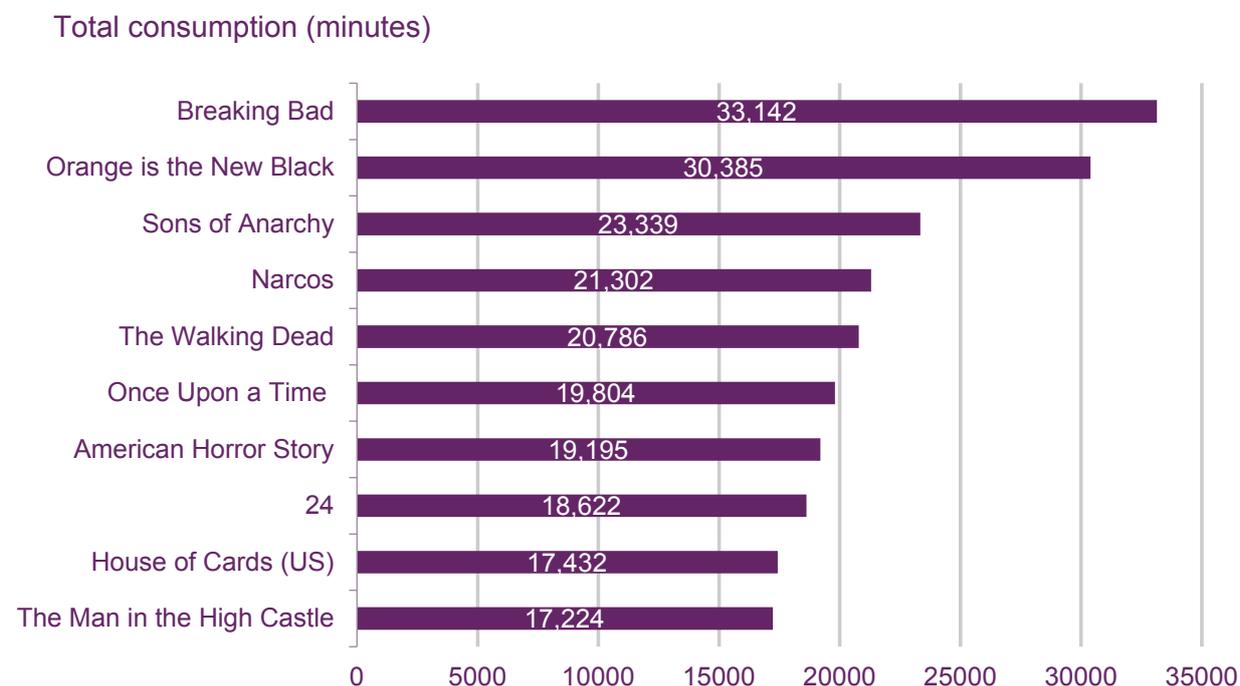
The top ten programmes watched across the three leading UK OTT SVoD services in 2015 were all US television drama series; *Breaking Bad* was the most watched programme. Four of the top ten programmes watched were US originations made by the SVoD provider:

<sup>25</sup> Figures obtained from press releases and industry statements by Ampere Analysis, 3 September 2015

*Orange Is The New Black*, *Narcos*, *House Of Cards* (Netflix) and *The Man In The High Castle* (Amazon Prime Video).

Given that both Netflix and Amazon are US companies, it is understandable that the majority of their libraries consist of US content. However, both services have announced forthcoming UK originations: *The Crown* (Netflix) and *The Grand Tour* (Amazon).

**Figure 2.10 Top ten television programmes consumed among all SVoD users**



Source: GfK SVoD Tracker, Q4 2015 October – December 2015

Base: All SVoD users

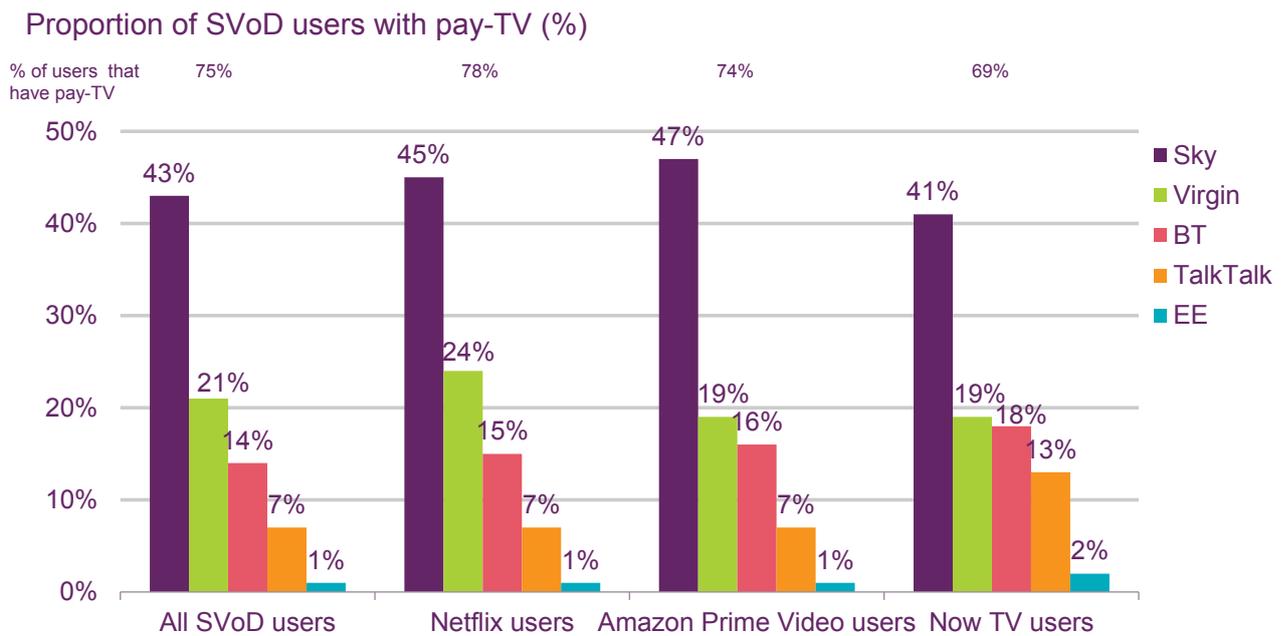
### Three-quarters of OTT SVoD users also had a pay-TV service in Q4 2015

Seventy-five per cent of SVoD users also had a subscription to a pay-TV service in 2015. Sky was the most popular pay-TV service, with 43% of SVoD users subscribing to it. Virgin Media was the second most popular, at just over two in ten (21%).

The take-up of both a pay-TV and an SVoD service, such as Netflix or Amazon, may reflect the different merits of each service. Pay-TV provides services and content that SVoD does not, such as broadcast TV (although Now TV does offer access to Sky's broadcast channels), broadcaster catch-up services and their own film rental/ retail stores. On the other hand, some SVoD services offer original and/or exclusive content and are generally cheaper than subscribing to a pay-TV service. However, as seen in Figure 2.9, the majority of SVoD users subscribe to SVoD for its content rather than for its pricing relative to pay TV.

As part of their promotional campaigns, some pay-TV services offer free trials and include some SVoD services in bundles for new customers. This might be one of the reasons that could explain the take-up of both a pay-TV and a VoD service.

**Figure 2.11 Proportion of SVoD users with a pay-TV service**



Source: GfK SVoD Tracker, Q4 2015 October-December 2015

P7: Services currently have

Base: All UK respondents (n=3259), Netflix users (n=2454), Amazon Prime Video users (n=1336), Now TV users (n=619)

Note: Users include those who subscribe to or are trialling an SVoD service

As well as this overlap with paid-for on-demand and traditional pay-TV, among SVoD users, there is also an overlap between the different paid-for on-demand services themselves; three in ten SVoD users subscribed to multiple services in Q4 2015, according to GfK. The most popular combination was Netflix + Amazon, with 17% of SVoD users taking up both services, while Amazon + NowTV was the least popular (at 2% of SVoD users). Six per cent of all SVoD users subscribed to all three of these services.

## 2.2 The TV and audio-visual industries

This section examines a range of metrics from the broadcast television industry, including revenues, content spend and broadcast hours. It also provides commentary on consumer choice in the pay-TV market: this is consistent with our commitment to monitor developments in the pay-TV sector.<sup>26</sup>

### 2.2.1 Overview of TV industry revenue

#### The UK broadcast TV industry grew by 3% in 2015 and was worth £13.6bn

The UK broadcast television industry generated £13.6bn in revenue during 2015, a £0.4bn (3%) rise on 2014 in nominal terms. This was driven by increases in the two main components of TV industry data – pay-TV subscription revenue and net advertising revenue (analysed in more detail in Figure 2.15).

Pay-TV subscription revenues provided the greatest contribution to overall TV industry revenues in 2015; the total of £6.2bn represented a 3% year-on-year increase.

Ofcom estimates that the BBC spent £2.6bn on television in 2015.<sup>27</sup> This was a 4% decrease on 2014, which required increased levels of spend - on the FIFA World Cup in Brazil and the Glasgow Commonwealth Games.

Revenue from other sources has remained relatively flat at £0.7bn since 2010.

**Figure 2.12 Total broadcast TV industry revenue, by source**



Source: Ofcom/broadcasters. Note: Figures expressed in nominal terms and replace previous Ofcom revenue data for TV industry, owing to restatements and improvements in methodologies.

'Subscription revenue' includes Ofcom's estimates of Sky UK, Virgin Media, BT TV, TalkTalk and fees for broadcasting Channel 4 channels in HD as well as that of ESPN and Top Up TV in the UK where relevant (ROI revenue is excluded). Now TV revenues are not included in 2015 figures but are in previous years. It also excludes revenue generated by broadband and telephony. 'Other' includes TV shopping, sponsorship, interactive (including premium-rate telephony services), programme sales and S4C's grant from the DCMS. Totals may not equal the sum of the components due to rounding.

<sup>26</sup> See section 1 of Ofcom's statement on the *Review of the pay TV wholesale must-offer obligation*, available at [http://stakeholders.ofcom.org.uk/binaries/consultations/wholesale-must-offer/statement/review\\_of\\_wmo\\_sStatement.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/wholesale-must-offer/statement/review_of_wmo_sStatement.pdf) and section 9 of Ofcom's *Strategic Review of Digital Communication*, available at <http://stakeholders.ofcom.org.uk/binaries/telecoms/policy/digital-comms-review/DCR-statement.pdf>

<sup>27</sup> From the BBC Annual Report 2015/16, includes the proportion of the licence fee that goes to S4C.

## Online TV revenues grew by 23% in 2015 but remain small compared to traditional TV revenue sources

According to IHS, online TV revenues grew by 23% year on year in nominal terms, to reach £976m.

Subscription revenue was the principal contributor to online TV revenues for the third consecutive year in 2015, at £451m. This represented annual growth of 42%, while free-to-view online advertising revenues grew by 18% year on year to reach £283m in 2015.

**Figure 2.13 Online TV revenues**



Source: IHS. All figures are nominal. FTV (free to view) revenues include advertising revenues only and include all services delivering online video free to the end consumer. Subscription includes digital-only subscribers and users of bundled services. PPV (pay-per-view) refers to a method of renting digital content and pay to watch it for a limited period including all content consumed on an on-demand basis. DTO (download-to-own) gives the customer ownership over the files they have downloaded. Includes only revenue from long form video content and excludes revenues generated from online user generated content.

## The pay-TV platform operators generated 45% of total TV industry revenue in 2015

The pay-TV platform operators - in 2015, Sky UK, Virgin Media, BT TV and TalkTalkTV - generated 45% of total TV industry revenue in 2015, a proportion unchanged since 2014. The £6.2bn they generated in 2015 was a 3% increase year on year, while they've seen an annual rate of growth of 4% each year since 2010.

The commercial multichannels (including the commercial PSB portfolio channels) have seen their revenue increase at an average annual rate of 6% since 2010. The annual growth was 12% for these channels, with revenues totalling £2.4bn in 2015.

Revenues for the commercial PSB channels remain above those of the wider multichannel sector, but have grown more slowly in recent years. Their 2015 revenues of £2.4bn were a 1% increase on the previous year.

Public funding of the TV industry has remained broadly flat since 2010, with a CAGR of 0%.

**Figure 2.14 Total TV industry revenue, by sector**



Source: Ofcom/broadcasters. Note: Figures expressed in nominal terms and replace previous Ofcom revenue data for TV industry, owing to restatements and improvements in methodologies. The platform operators are Sky UK, Virgin Media, BT TV and TalkTalk TV as well as, in previous years, ESPN and Top Up TV in the UK (Republic of Ireland revenue is excluded). Now TV revenues are not included in 2015 figures but are in previous years. Commercial PSB channels comprise ITV/ITV Breakfast, STV, UTV, Channel 4, Channel 5 and S4C. Commercial multichannels comprise all multichannels including the commercial PSB portfolio channels. Publicly-funded channels comprise BBC One, BBC Two, the BBC portfolio channels and S4C. The commercial revenues of S4C are included with the main commercial PSB channels while their licence fee revenue and DCMS grants come under publicly-funded channels. Totals may not equal the sum of the components due to rounding.

## 2.2.2 Commercial television revenues

### Television advertising revenues exceeded £4bn in 2015

TV advertising income increased by 7% (£0.3bn) in 2015 to reach £4.1bn – the first year revenues have exceeded £4bn since Ofcom has been reporting on the sector.

While there was a modest year-on-year increase of 2% in net advertising revenue (NAR) among the commercial PSB channels, most of the increase was in the other two groups of channels shown in Figure 2.15.

The commercial PSB portfolio channels saw a 12% annual increase in 2015, while the commercial multichannels' revenue grew by 15% to reach £1.2bn. Both have shown strong annual rates of growth over the past five years at 7% and 8% respectively.

**Figure 2.15 TV net advertising revenues, by source: 2010-2015**



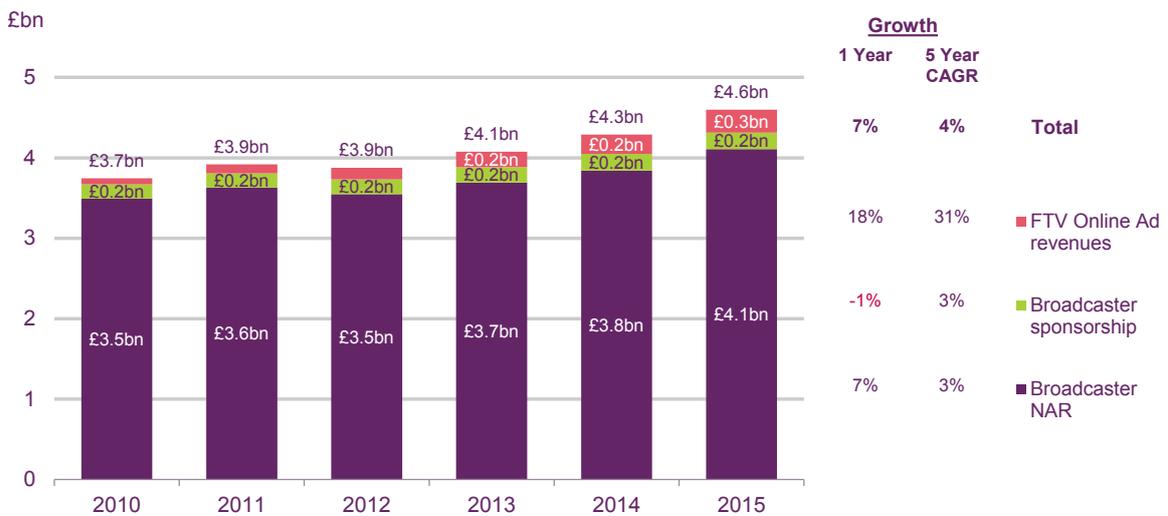
Source: Ofcom/broadcasters. Note: Figures expressed are in nominal terms and replace previous data published by Ofcom. Commercial PSB channels comprise ITV, STV, UTV, ITV Breakfast, Channel 4, Channel 5 and S4C (and their '+1' channels); Commercial PSB portfolio channels include, where relevant, ITV2, ITV3, ITV4, CITV, ITVBe, ITV Encore, ITV Breakfast 2, E4, More 4, Film 4, 4Seven, Five USA, 5\* and Spike (and their '+1' channels). For previous years closed channels have also been included. Sponsorship revenue not included. Totals may not equal the sum of the components due to rounding.

**Across traditional broadcast and online TV, total advertisement and sponsorship revenues reached £4.6bn in 2015**

There has been strong growth in online advertising revenues among the free-to-view (FTV) broadcasters in recent years, through services such as the ITV Hub, All4 and My5, which together grew by 18% in 2015 to reach £0.3bn.

However, this sector made up just over 6% of the total TV advertising and sponsorship market in 2015; the vast majority of TV advertising income was generated via traditional broadcast television.

**Figure 2.16 Total cross-platform advertising and sponsorship revenue**



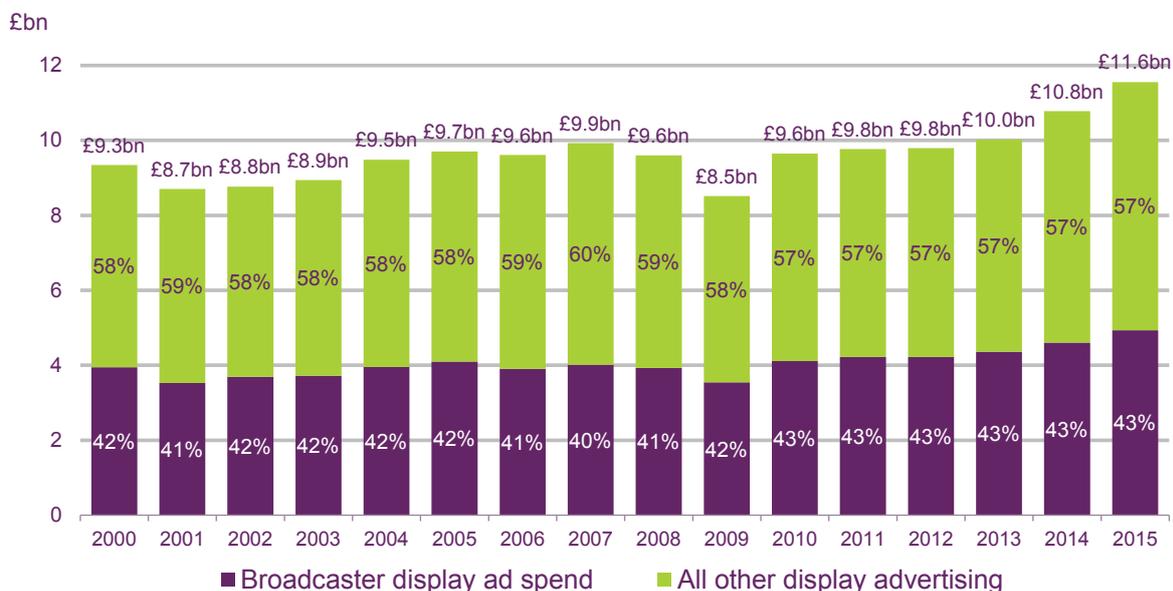
Source: Ofcom/broadcasters/IHS. All figures are nominal.

## Broadcast TV advertising has held up well as a proportion of all display advertising

According to Warc, total display advertising expenditure<sup>28</sup> stood at £11.6bn in 2015, of which broadcaster display advertising spend accounted for 43%.

Broadcaster advertising revenue as a proportion of all display advertising has proved resilient, remaining at 43% since 2010 – the greatest proportion since 2000.

**Figure 2.17 Broadcaster percentage share of all display advertising expenditure**



Source: AA/Warc Expenditure Report.

Note: Total display advertising expenditure includes television ads, TV sponsorship, TV VoD, radio, out of home, cinema, national and regional press display, internet and consumer magazines, but does not include response advertising such as direct mail or classified ads. Broadcaster display ads include advertising, sponsorship and online VoD ad revenue. Figures are net of discounts, and include agency commission, but excludes production costs. Figures are nominal.

## Broadcaster revenue raised from other sources increased by 3% in 2015

Television revenue raised from sources other than subscription income or advertising revenue increased by 3% in 2015 to total £694m.

The growth was driven by a revenue increase of 8% across the teleshopping sector; the 2015 revenue of £157m was the sector's highest level since 2012. There was also a 32% increase in revenue attributed to PPV services in 2015, totalling £45m.

<sup>28</sup> Figure includes all forms of media such as press, online and TV but doesn't include direct mail.

**Figure 2.18 Breakdown of ‘other’ commercial TV channel revenue: 2010-2015**



Source: Ofcom/broadcasters. ‘TV shopping’ represents aggregate operating margin of products sold via television. A funding agreement which was reached in April 2013 meant that the majority of S4C funding now comes out of the BBC’s licence fee income. Totals may not equal the sum of the components due to rounding. Owing to the nature of these revenue components, annual changes may be a function of a higher number of broadcaster returns being made by the time of writing, rather than material changes in the contributions that these revenue components are making to total industry income.

### 2.2.3 Spend on UK television programmes

#### Broadcasters spent £6.5bn on network programmes in 2015

Spend<sup>29</sup> by channels broadcasting in the UK in 2015 was £6.5bn in 2015, an increase of 3% year on year in nominal terms. Much of this increase was driven by the 6% rise in spend on film/sport channels in the multichannel sector, with 2015 seeing the start of BT Sport’s deal covering Champions League and Europa League football.

BBC One and the BBC portfolio channels were the only groups of channels shown in Figure 2.19 to have a nominal decrease in spend between 2014 and 2015, at 6% and 9% respectively. The decrease for BBC One is unsurprising, as in 2014 it broadcast the FIFA World Cup and the Glasgow Commonwealth Games.<sup>30</sup>

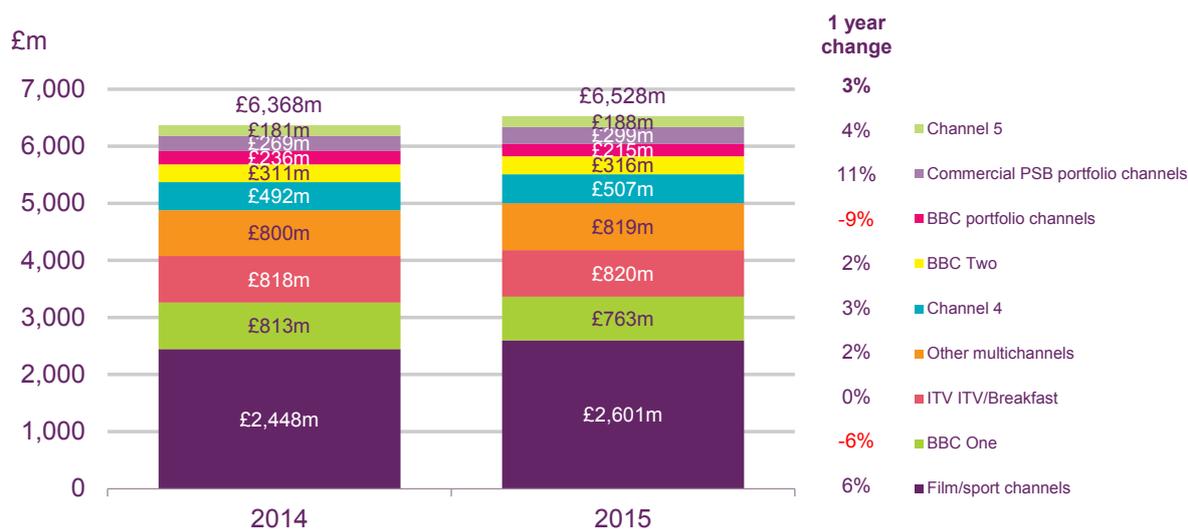
The greatest annual increase in spend was an 11% growth by the commercial PSB portfolio channels, helped by the introduction of *Spike* to the Channel 5 portfolio and increased content spend from both ITV and Channel 4 on their portfolio channels.

The PSB channels made up 43% of all network programme spend in 2015, while film and sport channels combined made up 40% of the total.

<sup>29</sup> Spend figures here do not represent the entire cost of programme production in the UK as they do not include third-party funding or the full cost of co-productions with overseas broadcasters.

<sup>30</sup> Further analysis on PSB spend is provided in the *PSB Annual Research Report*, available at <http://stakeholders.ofcom.org.uk/binaries/broadcast/reviews-investigations/psb-review/psb2016/PSB-Annual-Report-2016.pdf>

**Figure 2.19 Spend on network TV programmes: 2014-2015**



Source: Ofcom/broadcasters. Note: Figures expressed in nominal prices. Figures do not include spend on nations' and regions' output. BBC portfolio channels includes BBC Three, BBC Four, BBC News, BBC Parliament, CBBC and CBeebies (but not BBC HD). 'Other multichannels' include main channel genres (excluding sports and films). Programme spend comprises in-house productions, commissions from independents, acquired programmes and repeats (originations and acquisitions).

**The main five PSB channels spent marginally less on first-run UK originated content in 2015 than in the previous year<sup>31</sup>**

Spend on first-run UK originated programming (including nations' and regions' programming) by the main five PSB channels – BBC One, BBC Two, ITV (including ITV Breakfast), Channel 4 and Channel 5 – decreased by 1% in nominal terms to £2,576m in 2015.

While spend decreased across daytime and late night schedules, there was a 3% nominal increase in spend on originations broadcast at peak time, to £1,558m. There was a 5% nominal decrease in spend on nations' and regions' programming in 2015, to £270m.

<sup>31</sup> Further information on content spend across the PSB channels can be found in Ofcom's *PSB Annual Research Report*, in which figures are adjusted for inflation. The 2016 report is available at <http://stakeholders.ofcom.org.uk/binaries/broadcast/reviews-investigations/psb-review/psb2016/PSB-Annual-Report-2016.pdf>

**Figure 2.20 Spend on first-run UK originated output on the main five PSB channels**



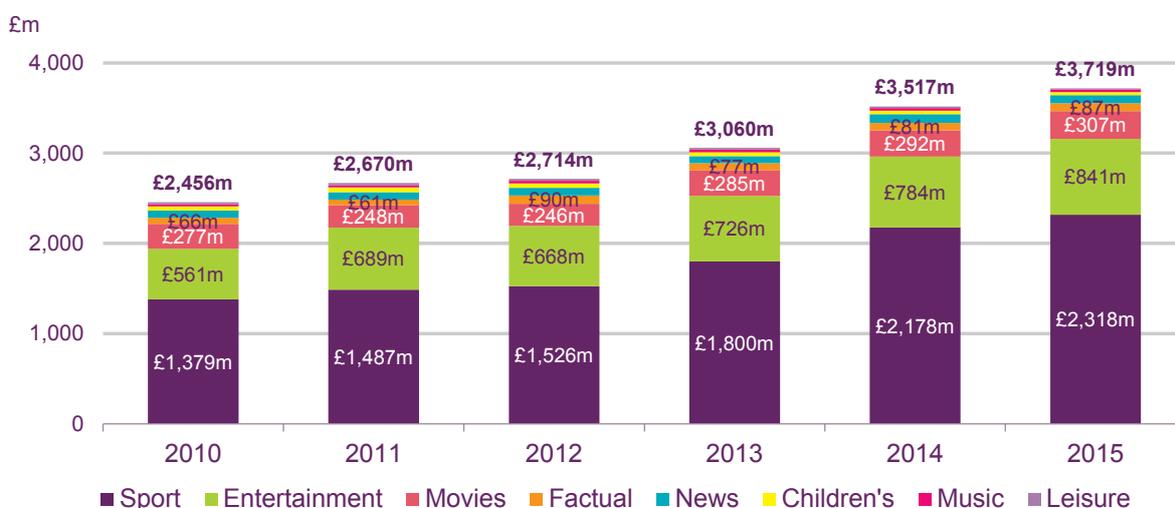
Source: Ofcom/broadcasters. Note: Figures are expressed in nominal terms. They include ITV breakfast, spending in the nations and regions on English-language programming (and a small amount of Irish-language programmes) but not the BBC portfolio channels, BBC Alba or S4C.

**Sports rights continue to make up the largest proportion of spend on content in the multichannel sector**

There was a 6% increase in spend on content for sports channels in the multichannel sector in 2015, to reach £2,318m in nominal terms. Programming for sports channels accounted for 62% of total content spend on the eight key genres shown in Figure 2.21, an increase on 56% in 2010.

Year on year, nominal content spend increased for the entertainment (7%), film (5%) and factual (8%) channels, but decreased for children’s channels (down by 9% to £34m) for the fourth consecutive year.

**Figure 2.21 Multichannel content spend in key genres: 2010-2015**



Source: Ofcom/broadcasters. Note: Spend expressed in nominal terms. Excludes BBC portfolio channels but includes commercial PSB portfolio channels.

## 2.2.4 UK independent production sector

### Independent producers' TV revenue were projected to reach their highest-ever level in 2015

According to Pact's annual census of independent production companies in the UK, TV revenues within the independent sector increased by 3% to £2,796m in 2015, when projected income is taken into consideration.

This increase was mainly a result of record 'other' international revenue – up 23% year on year to £851m when £347m of forecast revenue is included (indicated by the lighter shade of orange in the below chart). This is made up of primary commissions and co-productions from non-UK broadcasters, as well as revenue from companies' overseas operations.

**Figure 2.22 Independent producer TV-related revenues**



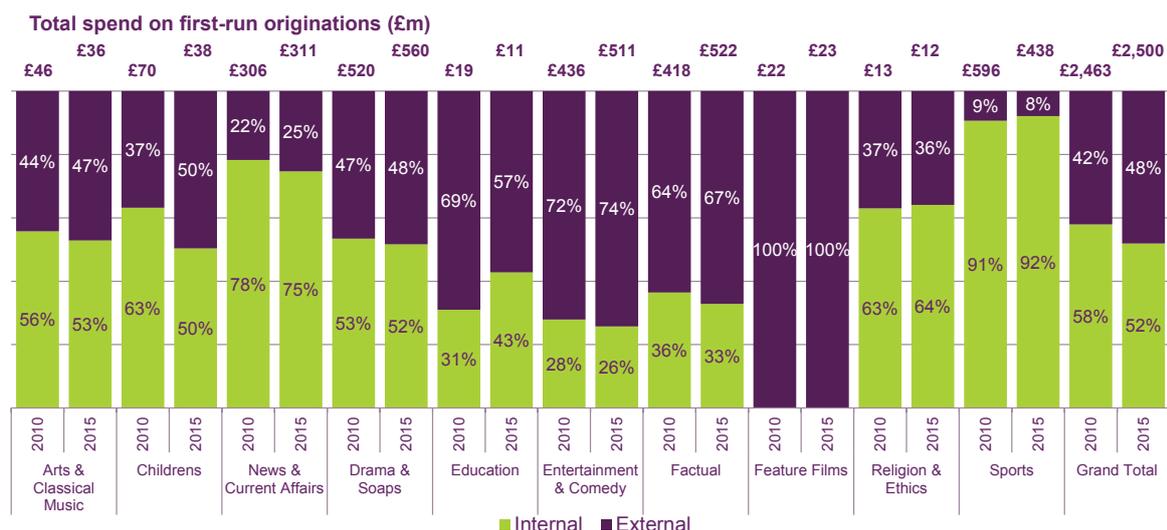
Source: Pact Independent Production Sector Financial Census and Survey 2016. Note: 'Other international income' refers to revenue from companies overseas operations and any primary commissions received from non-UK broadcasters; 'International sales of UK finished programmes': sales of first-run UK programming sold as finished product abroad; 'UK rights income': UK secondary sales, publishing, formats, DVD sales etc. There was a change in reporting methodology of some of the sampled companies in 2015. To help reflect the market Pact have used reported average year-on-year growth figures to forecast international sales on a like-for-like basis from the previous year. Forecast sales for 2015 were £347m for 'other international income' and £34m for 'international sales of UK finished programmes' in 2015, both of which are represented by the lighter shade in the above chart.

### The proportion of PSB channels' spend on first-run UK originations that went to external producers increased between 2010 and 2015

Across all genres, 48% of spend on first-run UK originated content by the PSB channels in 2015 (excluding nations' and regions' spend) was spent on external commissions, an increase on the 42% external spend recorded in 2010.

Looking at the genres that make up most of the PSB channels' spend, external producers are commissioned to provide the majority of the investment for entertainment and comedy (74%) and for factual originations (67%) while their share of original drama and soaps spend increased marginally: from 47% in 2010 to 48% in 2015.

**Figure 2.23 Relative share of spend on first-run originated content by genre, in-house vs. external producers: 2010 and 2015**



Source: Ofcom/broadcasters. Note: Figures are expressed in nominal terms. Includes spend by the main five PSB channels and BBC portfolio channels on first-run originated content broadcast, all day, and excludes nations'/regions' output.

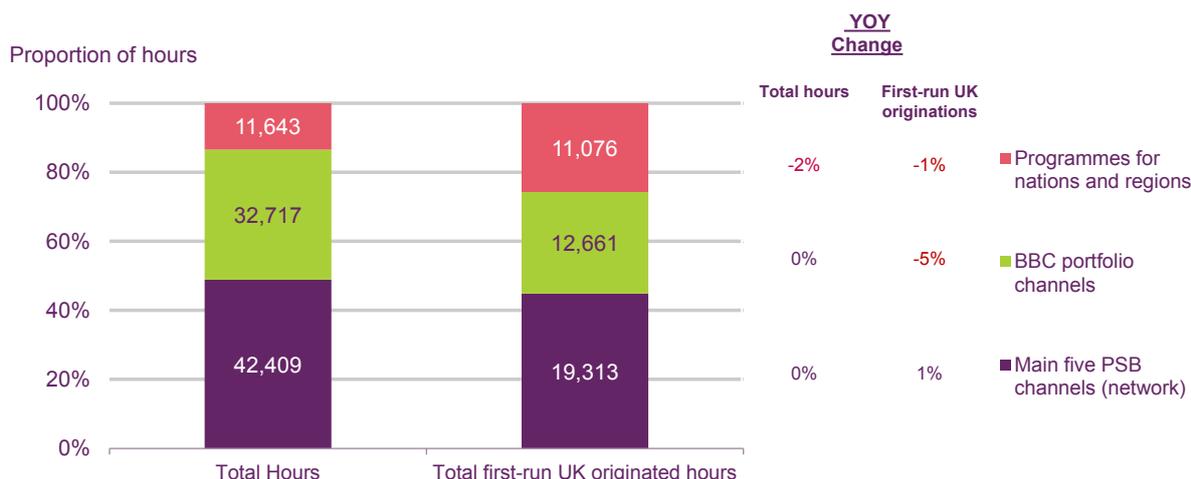
## 2.2.5 UK television output

### 50% of output on the PSB channels was first-run UK originations in 2015

In 2015 86,769 hours of content were broadcast by the PSB channels (including programmes for the nations and regions); 50% of this was first-run UK originations, produced either in-house or commissioned from external producers.

Although there was a slight increase in original UK output on the main five PSB channels, there was a 5% decrease in such output on the BBC portfolio channels. This was mainly because fewer originations were broadcast on BBC Three leading up to its closure in February 2016, after which it began operating as an internet-only brand.

**Figure 2.24 Total and first-run UK originated hours of output on the PSB channels: 2015**



Source: Ofcom/broadcasters. Note: ITV Breakfast is included within the figures for the main five channels. Regional hours exclude Welsh and Gaelic-language programming but include a small amount of Irish-language programmes.

**Hours of first-run UK-originated content broadcast by the main five PSB channels have remained steady in recent years**

There was a modest annual decrease (17 hours) in the hours of original UK programming broadcast by the PSB channels (including programming for the nations and regions) in 2015, with average annual growth remaining flat since 2010.

Programmes broadcast during peak hours between 6pm and 10.30pm tend to have larger budgets and larger audiences. Original network output in peak has increased by an average of 1% each year since 2010, including in 2015.

**Figure 2.25 Hours of first-run UK originated output on the main five PSB channels**

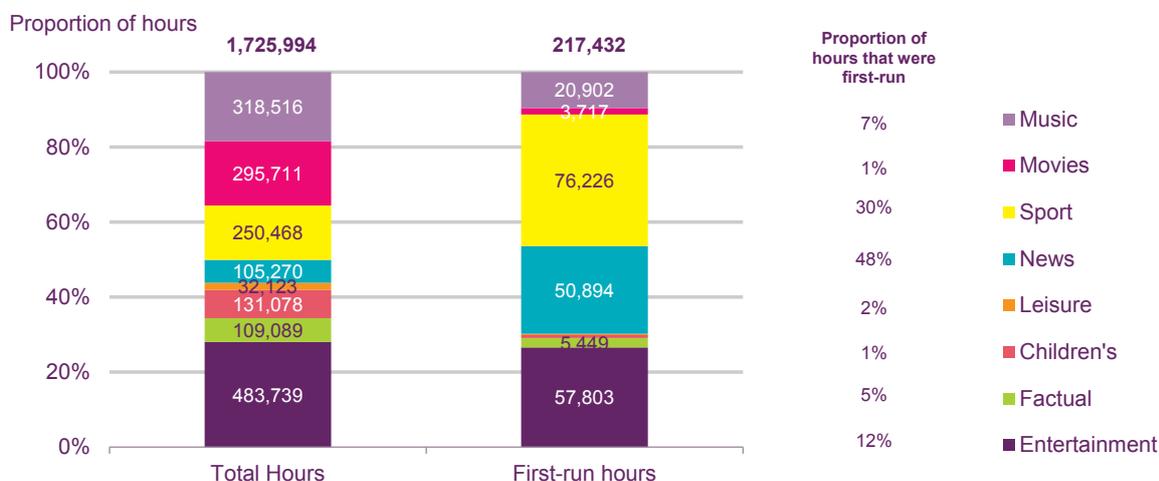


Source: Ofcom/broadcasters. Note: Figures include ITV breakfast and a small amount of Irish-language programmes but do not include the BBC's portfolio channels, BBC Alba or S4C.

## First-run originations/acquisitions made up 13% of all hours broadcast on the non-PSB channels in 2015

The multichannel sector consists of all TV channels that broadcast to the UK and are licensed by Ofcom, with the exception of the PSB channels. Of the 1.73 million hours broadcast by these channels in 2015, 13% were first-run originations or acquisitions.

**Figure 2.26 Total and first-run originated/acquired hours of output in the multichannel sector: 2015**



Source: Ofcom/broadcasters. Note: Broadcast hours exclude Sky Box Office and 'barker' channels which promote TV content. First-run hours include first-run in-house, commissioned and acquired content.

## Consumer choice in the pay-TV sector

Pay-TV consumers have a wider range of options than ever before, with an increasing choice of service provider and content. The retail offerings of the four largest traditional pay-TV providers are summarised below, while the pay-TV services offered by OTT providers are covered in section 2.1.3.<sup>32</sup>

<sup>32</sup> We note that EE also provides an IPTV via its EE TV box and that Vodafone is due to launch an IPTV service later in 2016.

**Figure 2.27 Summary of retail offerings from traditional pay-TV providers**

| <b>Provider</b><br>(Q4 2015 subscribers)    | <b>Retail offering</b>  |
|---|---|
| <b>BT TV YouView</b><br>(1.4 million)       | <ul style="list-style-type: none"> <li>• <b>Overview:</b> BT TV only available when bundled with BT broadband and fixed line. YouView box included. Choice of three TV packages, all including the AMC channel.</li> <li>• <b>Movies:</b> Sky Movies can be added to all TV packages.</li> <li>• <b>Sports:</b> All packages include BT Sport channels. Customers can add Sky Sports 1 &amp; 2.</li> <li>• <b>VoD/out-of-home:</b> All packages include catch-up TV. BT TV App allowing out-of-home viewing included in some packages.</li> <li>• <b>Technological developments:</b> BT launched the first Ultra-HD channel in August 2015.</li> </ul>  |
| <b>Sky</b><br>(11.3 million)                | <ul style="list-style-type: none"> <li>• <b>Overview:</b> Range of DSat TV packages available standalone or bundled with Sky broadband and fixed line. All packages include Sky entertainment channels. Packages come with Sky+ HD box or Sky Q box. Sky also retails OTT through NOW TV.</li> <li>• <b>Movies:</b> All Sky Movies channels available.</li> <li>• <b>Sports:</b> All Sky Sports channels available. Sky customers can also access BT Sport by subscribing to BT.</li> <li>• <b>VoD/out-of-home:</b> All TV bundles include catch-up TV and out-of-home viewing through Sky Go.</li> <li>• <b>Technological developments:</b> Sky launched a new Sky Q set-top box in 2016 with UHD capability and which allows viewers to continue watching programmes on different devices and screens as they wish. It is planning to launch a DTT-enabled Now TV set-top box later this year.</li> </ul> |
| <b>TalkTalk TV YouView</b><br>(1.4 million) | <ul style="list-style-type: none"> <li>• <b>Overview:</b> TalkTalk TV packages only available when bundled with TalkTalk broadband and fixed line. YouView box included. Choice of two TV packages, one of which includes six Sky channels. Various content “Boosts” available through both packages.</li> <li>• <b>Movies:</b> Sky Movies channels available through Sky Movies Boost.</li> <li>• <b>Sports:</b> Sky Sports channels available through Sky Sports Boost. TalkTalk customers can access BT Sport by subscribing to BT.</li> <li>• <b>VoD/out-of-home:</b> Both packages include catch-up TV and out-of-home viewing through TV2Go App.</li> </ul>   |
| <b>Virgin Media</b><br>(3.7 million)        | <ul style="list-style-type: none"> <li>• <b>Overview:</b> Range of TV packages available standalone or bundled with Virgin Media broadband and fixed line. TiVo box included.</li> <li>• <b>Movies:</b> Sky Movies channels available. Some packages include them as standard, whereas other packages allow add-on purchases.</li> <li>• <b>Sports:</b> All Sky Sports and BT Sport channels available. Some packages include them as standard, whereas other packages allow add-on purchases.</li> <li>• <b>VoD/out-of-home:</b> All TV packages include catch-up TV and out-of-home viewing through Virgin TV Anywhere.</li> <li>• <b>Technological developments:</b> Virgin Media has announced that it will launch a new, TiVo-powered set-top box later this year that will introduce UHD streaming capabilities.</li> </ul>   |

*Source: Providers’ websites. Subscriber numbers are from Enders Analysis, with Sky figures including Now TV, Republic of Ireland and business overseas.*

## Sports content availability

As can be seen from Figure 2.28, sports content continues to be available from a number of pay-TV providers, with Sky Sports and BT Sport in particular being drivers in the take-up of pay-TV services.<sup>33</sup>

The majority of Sky Sports subscribers take those channels over Sky's own satellite platform as part of a pay-TV or communications package from Sky. At extra cost, customers can access HD versions of these channels (and any other channels in their package). Sky Sports channels are also offered as part of its Sky Go service, free of charge to its existing satellite subscribers.

BT makes its BT Sport channels available in a number of different ways. It offers the BT Sport Pack (containing the full range of BT Sport channels) free of charge to its BT TV customers, provided they renew their TV and broadband contract for 12 months, with access to HD versions of the channels available at an additional cost. BT Sport is also available separately via the BT Sport App to BT broadband and mobile customers, while consumers using Sky or TalkTalk YouView can access the channels through each platform by contracting directly with BT.

**Figure 2.28 Summary of Sky Sports and BT Sport availability from pay-TV providers**

|                                       | BT TV (YouView) | Sky (DSat)     | TalkTalk YouView | Virgin Media | Other   |
|---------------------------------------|-----------------|----------------|------------------|--------------|---------|
| Sky Sports 1&2                        | ✓               | ✓              | ✓ (no HD)        | ✓            | ×       |
| Sky Sports 3, 4, 5 & F1               | ×               | ✓              | ✓ (no HD)        | ✓            | ×       |
| NOW TV (Sky Sports passes)            | ×               | ×              | ×                | ×            | ✓ EE TV |
| BT Sport Pack (all BT Sport channels) | ✓               | ✓ (BT retails) | ✓ (BT retails)   | ✓            | ×       |
| BT Sport Lite (BT Sport 1 only)       | ✓               | ✓ (BT retails) | ×                | ×            | ×       |

Source: Providers' websites.

### 2.2.6 The local TV sector

There are now 21 local television stations on air in the UK, operating a variety of business models and offering different approaches to programming for local viewers, with a further 13 services due to launch in the next year. Local TV channels have adopted a range of business models, ranging from not-for-profit community ventures to new commercial partnerships between local newspapers, TV production companies and educational institutions.

The local TV sector has contributed new local programming to the UK media landscape, particularly local news, but some channels have found their original output commitments

<sup>33</sup> As discussed in Ofcom's statement on the *Review of the pay-TV wholesale must-offer obligation*, published in November 2015 and available at [http://stakeholders.ofcom.org.uk/binaries/consultations/wholesale-must-offer/statement/review\\_of\\_wmo\\_sStatement.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/wholesale-must-offer/statement/review_of_wmo_sStatement.pdf)

difficult to deliver. Given some channels' reliance on local TV funding from the BBC, which ends in 2020, they may face a challenge to generate sufficient income in the longer term. Some channels may have to further diversify their revenue streams.

### **In 2011, the Government set out its plan for introducing local TV services**

Writing in its January 2011 *Local Media Action Plan*, the Government said that local media "has an important part to play in drawing communities together" and said "it reflects back communities' stories and information of direct interest and relevance".<sup>34</sup> It committed to introduce local TV services in locations across the UK.

In 2012, a statutory framework to enable local TV services to be introduced was established.<sup>35</sup> Under this framework, Ofcom was tasked with licensing individual services in locations around the UK, and also with licensing a new digital terrestrial television (DTT) multiplex as the means by which all of the local services would be broadcast.

As well as guaranteed access to DTT spectrum, local TV services benefit from appropriate prominence on the electronic programme guide (EPG), and access to some protected funding from the BBC.<sup>36</sup> In its recent White Paper on the future of the BBC<sup>37</sup>, the Government confirmed that all local TV services which launch by 31 July 2017 will continue to be able to access this protected funding from the BBC in their first three years, thereby earning predictable income in those first years of broadcasting, but that this funding is being phased out: no further BBC protected funding will be available (i.e. after July 2020 at the latest).

Local TV licences have been awarded in a competitive process, in which applicants propose programming commitments to reflect the type of service they propose to broadcast. Applications are considered against specified statutory criteria, including the extent to which a proposed service would meet the needs of its local area, and increase the number of television programmes made in, or about, the local area.

In order to ensure that licensees deliver the service they proposed, programming commitments are captured in their licences. Licence obligations therefore vary by service; they are not uniform. They typically include a number of hours for first-run and repeated local programming. Within this local programming they contain a number of hours of news and current affairs as well as a number of hours in peak viewing time.

Local TV services range from not-for-profit community ventures to new commercial partnerships between local newspapers, TV production companies and educational institutions.

### **Twenty-one local TV services are now on air in the UK**

The first service launched in 2013, with a further 19 services launching during 2014 and 2015. One further service - Bay TV Swansea - launched in July 2016. The list of services on air, with their specific launch dates, can be found in Figure 2.29.

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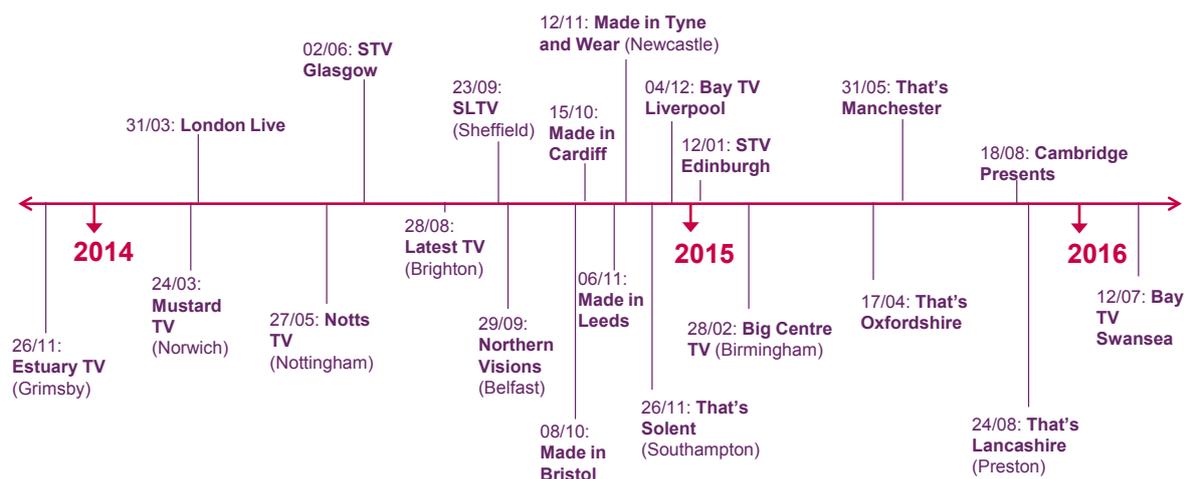
<sup>34</sup> See paragraph 2.1 of the document entitled 'Local Media Action Plan' dated 19 January 2011, [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/72995/ConDoc-Local\\_Media\\_Action\\_Plan\\_190111.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/72995/ConDoc-Local_Media_Action_Plan_190111.pdf)

<sup>35</sup> By means of the *Local Digital Television Programme Services Order 2012*.

<sup>36</sup> In return for which they supply news items to the BBC.

<sup>37</sup> DCMS, '[A BBC for the future: a broadcaster of distinction](#)', May 2016.

**Figure 2.29 Launch dates of local TV services**



Source: Ofcom

In addition to the 21 services already on air, a further 13 licences have been awarded, with these services expected to launch over the course of 2016 and 2017.<sup>38</sup>

As noted above, the individual local services are broadcast via a single DTT multiplex, which Ofcom also licenses. The multiplex is operated by Comux, a company which is collectively owned by the local service providers.

### Many local TV services face challenges to generate sufficient income

Figure 2.30 shows the total expenditure and the total income of all services that were broadcasting in 2015. It also shows the total income broken down by source.

The total income for all services broadcasting in 2015 was £8.8m. Local TV services are funded from a variety of sources. These include advertising, BBC funding (primarily protected funding through BBC purchase of local TV news items), other commercial and non-commercial income, and teleshopping. The protected BBC funding was intended “to provide the new local TV services with some funding certainty”.<sup>39</sup>

Across all channels, the majority of the income generated by local TV services in 2015 (53%) came from advertising, while BBC funding accounted for more than a quarter (29%) of the sector’s income. Some services appear to be more reliant on funding from the BBC than others; in 2015, BBC funding accounted for as little as 2% of total income for one service and as much as 100% of income for another.

During 2015, nine channels received more than 50% of their income from the BBC, although five of these were not on air for the full year. Services that had been live for less than 12 months reported a higher proportion of BBC funding (on average, 74% of their income was derived from the BBC) than those which had been live for more than 12 months (on average, 43% of their income was derived from the BBC).

<sup>38</sup> These licences are for the following areas: Mold, Guildford, Reading, Salisbury, Middlesbrough, Basingstoke, Maidstone, Scarborough, York, Dundee, Aberdeen, Ayr and Carlisle.

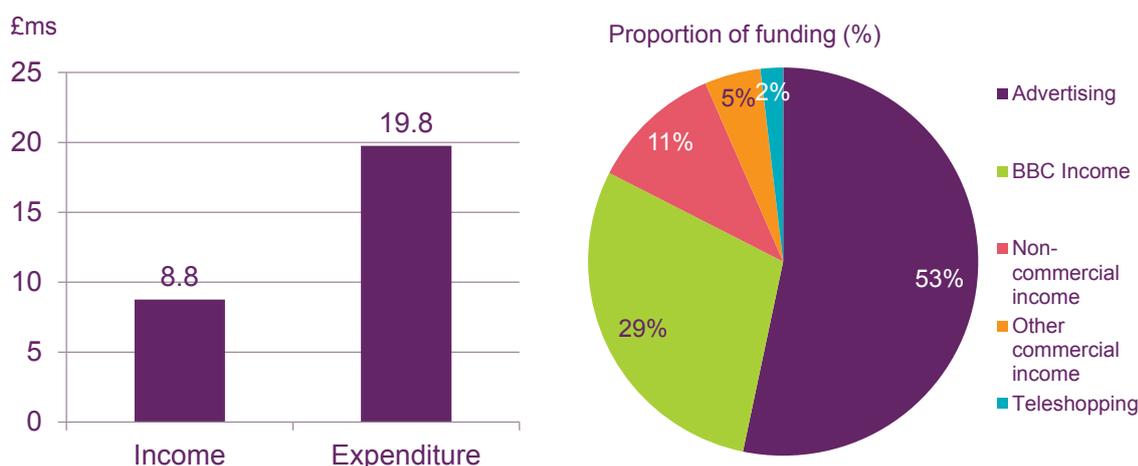
<sup>39</sup> See paragraph 94 of *Local TV: making the vision happen* (December 2011),

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/86566/local-tv\\_making-the-vision-happen.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/86566/local-tv_making-the-vision-happen.pdf).

As noted above, protected BBC funding ends when a service has been broadcasting for three years, and it will be phased out by the Government by 2020. This funding is front-loaded, such that the guaranteed sums in the first and second years (£150k and £110k respectively) are considerably greater than that in the third year (£40k). This means that channels are supported in their initial start-up phase, but will need to further diversify their business models in the future.

As Figure 2.30 shows, spend by local TV services outweighed income in 2015. The total expenditure of all channels broadcasting was £19.8m, of which £11.9m was spent on content. There were two local TV services that did not operate at a loss in 2015.

**Figure 2.30** Income and expenditure information for local TV services broadcasting in 2015



Source: Ofcom/ broadcasters. Includes channels which launched in 2015.

### Channels have contributed new local programming to the UK media landscape, but many have found their original output commitments challenging to deliver

As part of the licence application process, applicants are required to submit proposals for the number of hours of first-run and repeated local programming they plan to broadcast. These commitments are then captured in the licences of all successful applicants. Ofcom has a minimum expectation that seven hours per week of local news programming should not be too burdensome for even the smallest of channels, but beyond this, applicants and licensees are free to decide the level of commitments they want to provide.<sup>40</sup>

Figure 2.31 shows the hours of first-run local programming broadcast in 2015 by local TV services.<sup>41</sup> It shows that, across the year, the average volume of first-run local programming broadcast by a local TV service was 1,732 hours, of which 734 hours were first-run local news and current affairs programmes. Although the schedules of individual services will vary significantly, and not all services were on air for the full year, these figures equate to just over 33 hours per week of first-run local programming, and around 14 hours per week of first-run local news and current affairs.

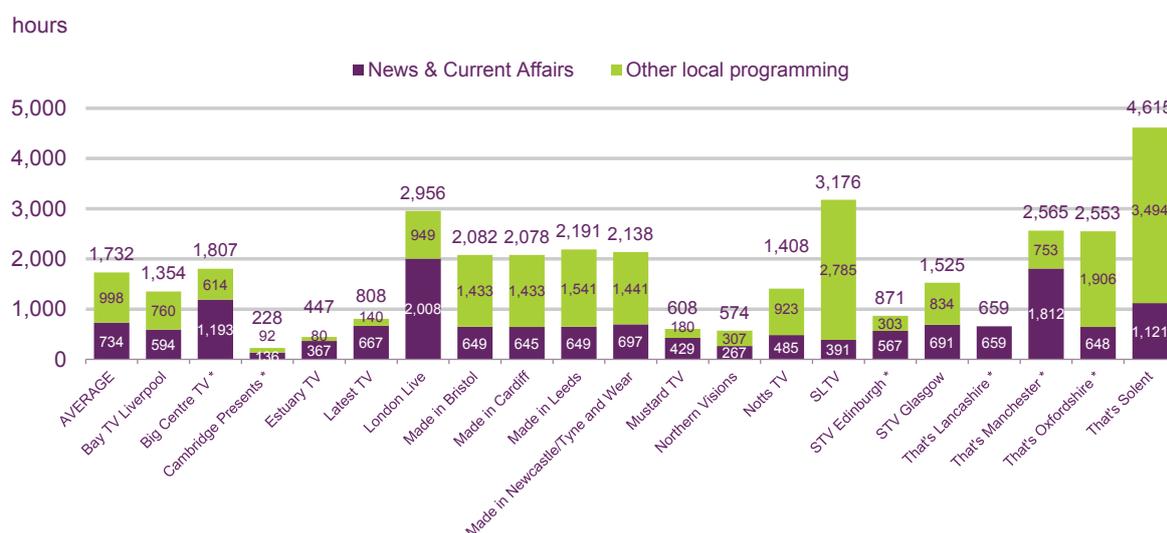
<sup>40</sup> See paragraph 1.47 of Ofcom's statement *Licensing Local Television: how Ofcom will exercise its new powers and duties to license new local television services* dated 10 May 2012, <http://stakeholders.ofcom.org.uk/binaries/consultations/localtv/statement/local-tv-statement.pdf>.

<sup>41</sup> Because of the freedom given to licence applicants to specify their own commitments in their application, there is no correlation between programming commitments and the size of the geographical DTT area within which the channel may be received.

The majority of the channels have, however, asked to reduce their programming commitments once they have started broadcasting. By 30 April 2016, 14 of the 20 channels on air had submitted a programming commitment change request to Ofcom. In many cases, this has been because those services felt unable to deliver their obligations.

Ofcom is able to agree such requests if it is satisfied in relation to specified statutory criteria<sup>42</sup>, such as whether there is a change to the character of the service. Ofcom has received a number of such requests to reduce programming commitments: 25 requests by the end of April 2016 (some channels have applied more than once), of which 21 have been approved.

**Figure 2.31 Hours of first-run local programming on local TV services: 2015**



Source: Ofcom/broadcasters. Figures calculated on the basis of the hours that were required in 2015 according to the licence, with the addition of the average weekly over-delivery reported by the service in its local return. \* indicates channels that launched during 2015.

### To increase their audience, the majority of local TV channels are making themselves available on multiple platforms

In its initial framework for the sector, the Government focused on bringing about local TV on DTT, and considered it best to allow services to make their own decisions about non-DTT transmission platforms.<sup>43</sup> As a result, the presence of a local TV service on cable or satellite is not covered by the local TV licence; the channel requires a standard Ofcom licence for those platforms.

Audience figures are important for the local TV sector to generate sufficient income. To increase their audiences, many services have chosen to be available on other platforms, as shown in Figure 2.32. This shows that of the services broadcasting in 2015, 16 were present on Virgin Media and eight were also present on Sky. Sixteen services are also available online.

<sup>42</sup> As set out in the *Local Digital Television Programme Services Order 2012*

<sup>43</sup> See paragraphs 29 to 31 of the document *Local TV: Making The Vision Happen:*

*Government response to the consultations on the Local TV Framework and Pioneer Locations and final policy position*, dated December 2011,

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/86566/local-tv\\_making-the-vision-happen.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/86566/local-tv_making-the-vision-happen.pdf).

**Figure 2.32 Platform availability of local TV services broadcasting in 2015**

| Channel                           | Virgin Media | Sky | Internet | DTT | Channel                     | Virgin Media | Sky | Internet | DTT |
|-----------------------------------|--------------|-----|----------|-----|-----------------------------|--------------|-----|----------|-----|
| London Live                       | ✓            | ✓   | ✓        | ✓   | Estuary TV (Grimsby)        | ✓            |     | ✓        | ✓   |
| Made in Leeds                     | ✓            | ✓   | ✓        | ✓   | SLTV (Sheffield)            | ✓            |     | ✓        | ✓   |
| STV Glasgow                       | ✓            | ✓   | ✓        | ✓   | Mustard TV (Norwich)        | ✓            |     | ✓        | ✓   |
| Made in Tyne and Wear (Newcastle) | ✓            | ✓   | ✓        | ✓   | Northern Visions (Belfast)  | ✓            |     | ✓        | ✓   |
| STV Edinburgh                     | ✓            | ✓   | ✓        | ✓   | Latest TV (Brighton)        | ✓            |     | ✓        | ✓   |
| Made in Cardiff                   | ✓            | ✓   | ✓        | ✓   | Cambridge Presents          | ✓            |     | ✓        | ✓   |
| Made in Bristol                   | ✓            | ✓   | ✓        | ✓   | That's Manchester           |              |     |          | ✓   |
| Notts TV (Nottingham)             | ✓            | ✓   | ✓        | ✓   | That's Solent (Southampton) |              |     |          | ✓   |
| Big Centre TV                     | ✓            |     | ✓        | ✓   | That's Oxford               |              |     |          | ✓   |
| Bay TV Liverpool                  | ✓            |     | ✓        | ✓   | That's Lancashire (Preston) |              |     |          | ✓   |

Source: Ofcom/ broadcasters. ✓ indicates availability on platform.

**An average of 1.5m households per week (5.8% of UK households) watched a local TV channel across all platforms in the year to April 2016**

Viewing figures for the majority of local TV channels in the UK are reported by BARB as a collective 'local TV macro'.<sup>44</sup> The exceptions to this are London Live, which is reported separately, and the STV channels (Glasgow and Edinburgh) which are reported together as 'STV City'. Our analysis combines all of these measured local TV channels into a single group to give an overall picture of local TV viewing.

BARB data used below show the absolute number of households who watched any local TV service between the launch of the local TV macro group on 20 April 2015 to the end of April 2016. This includes viewing on DTT (i.e. the Freeview platform, whether through YouView, BT TV, TalkTalk, Plusnet or Freeview itself) and on the Sky and Virgin Media platforms. The local TV channels can choose to be carried on the Sky and Virgin platforms, although not all of them do so.

Local TV services are not available nationally, unlike other channels, and the size of the coverage area for the channels varies by platform. The total population that is actually able to receive the reported local TV channels is not available in BARB, and therefore we compare their total viewing to the entire UK TV population. We do, however, know how many people can receive the reported local TV channels through DTT, as we have data on the coverage that each transmitter achieves. We estimate that a total of 9.7 million households across the UK can receive the reported local TV services through digital terrestrial (DTT) reception.

It is not possible for us to estimate the coverage areas for local TV for Sky or Virgin, as these vary for each service and region.

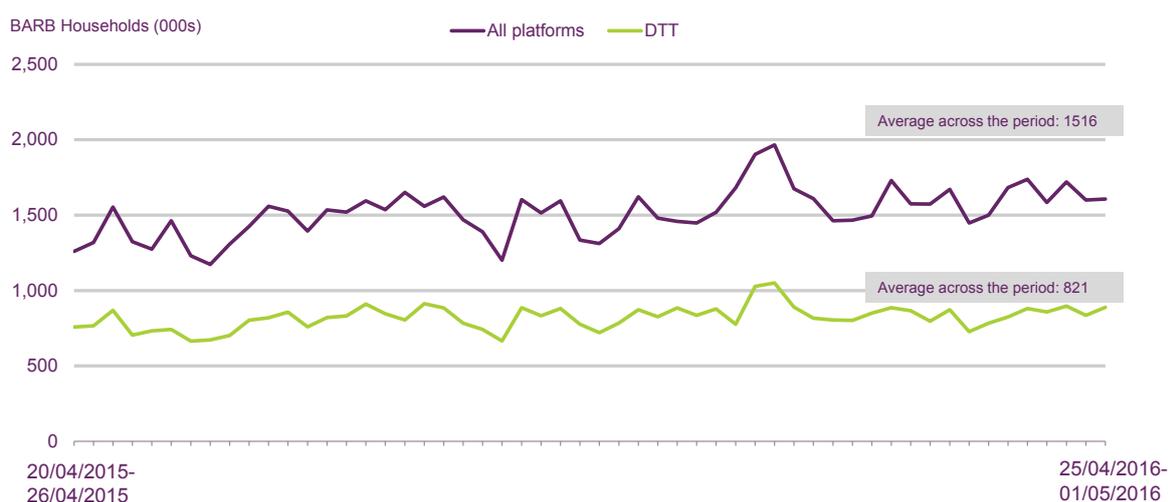
Across the analysis period, an average of 821,000 UK households watched at least one of the local TV channels through DTT in an average week, for at least three consecutive minutes. Viewing of any local TV channel through the DTT platform peaked during the

<sup>44</sup> Across our analysis period the channels that subscribe to BARB and are included in the local TV macro group were: Estuary TV; Latest TV; Made channels Bristol, Cardiff, Leeds and Newcastle; Notts TV; Northern Visions TV Belfast, Sheffield Live TV and Bay TV Liverpool (the latter was added on 15 June 2015).

Christmas and New Year period, with over a million households tuning in to watch a local TV service over these two weeks. When compared to the estimated DTT coverage area of 9.7 million households, this means that the average weekly three-minute reach of local TV services through the DTT platform was 8.5% across the period. The peak reach was 10.8% during the New Year week (28 December – 3 January 2016).

Across the same period, an average of 1.5 million households per week watched a local TV service for a minimum of three consecutive minutes through any platform across the UK <sup>45</sup> (5.8% of UK homes). This figure includes those who watched a local TV service through Sky or Virgin Media as well as DTT. The highest number of households in the entire UK TV population watching any local TV channel for the period was 2.0 million during the New Year week (28 December – 3 January 2016).

**Figure 2.33 Average weekly three-minute reach (000s) of local TV stations: April 2015-April 2016**



Source: BARB, all homes. Based on viewing through the reception mode of DTT and all platforms (DTT, DSAT, DCAB and Other). Full weeks are used for the correct calculation of weekly averages.

<sup>45</sup> 26.1 million average across the analysis period (source: BARB).

## 2.3 The TV and audio-visual consumer

This section examines the availability and take-up of digital TV platforms and trends in television consumption, including some categories of non-broadcast TV viewing. It also analyses viewers' attitudes to television.

### 2.3.1 Platform take-up

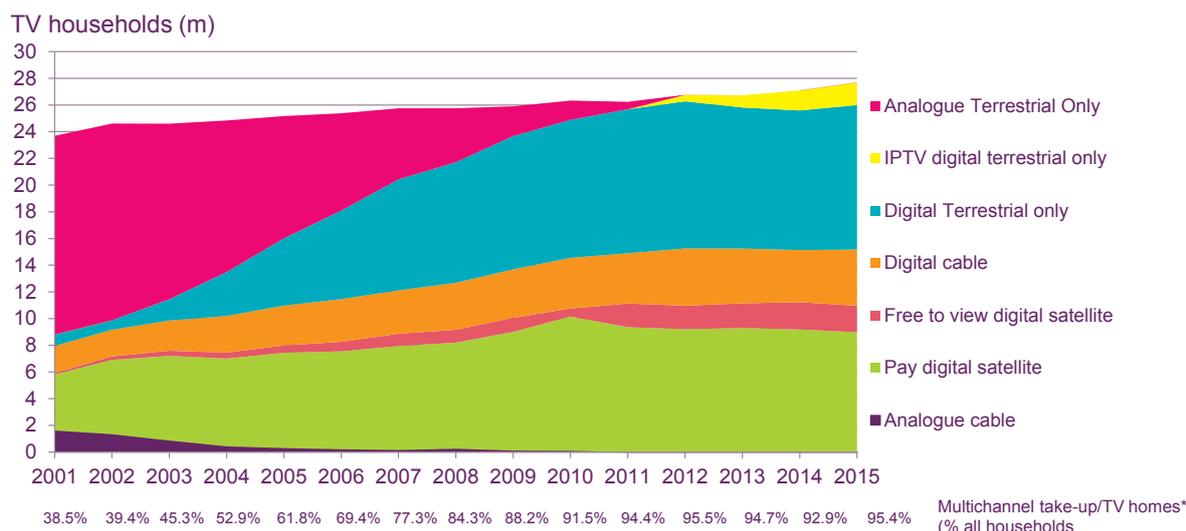
Since completion of digital switchover (DSO) in October 2012, digital is now the only form of broadcast signal available in the UK. Figure 2.34 shows the number of households by the platform they have in the home.

According to BARB's Establishment Survey, the proportion of all UK homes that owned a TV set able to receive broadcast television was 95.4% in the final quarter of 2015 (see chart notes for a change in methodology). The remaining 4.6%, homes without a TV set, either choose to watch audio-visual content using an internet connection only, or do not use a television, or the television does not receive a broadcast signal.

Homes that only have digital terrestrial TV make up the largest proportion of all homes. The proportion with pay-digital satellite has plateaued, particularly since 2011, after peak take-up in 2010. And there has been only incremental growth in digital cable take-up in recent years, while free-to-view satellite services such as Freesat have grown slowly, and account for the smallest proportion of all homes. The Freeview service has been available through a number of providers since 2012. In Q4 2015, 6.1% of homes had any one of BT TV/ TalkTalk/ YouView only (without satellite, cable or other platforms), shown below as IPTV digital terrestrial. At the end of 2015, PlusNet launched YouView as part of its offering although take-up data will only be available from Q1 2016.

In addition to the platform take-up highlighted below, many consumers are subscribing to paid-for VoD services, as outlined in section 2.1.3, on various platforms.

**Figure 2.34 Platform take-up: 2001-2015**



Source: BARB Establishment Survey. Household-level data based on all TV sets in homes. Data points are based on Q4 of each year. Notes: From Q4 2015 BARB changed its methodology and its definition of a TV set-owning household. The main change was that up to Q4 2015 a home was defined as a TV home if it owned a TV set which had been used to watch TV programmes in the last six months. Since Q4 2015 the claimed usage element was removed, which led to an increase in the TV set homes population. BARB did not re-state the TV homes population before the methodology change, so comparisons with previous data should be made with caution.

\*Digital switchover was completed across the UK in October 2012. Data from 2013 therefore refers to TV households as a % of all households.

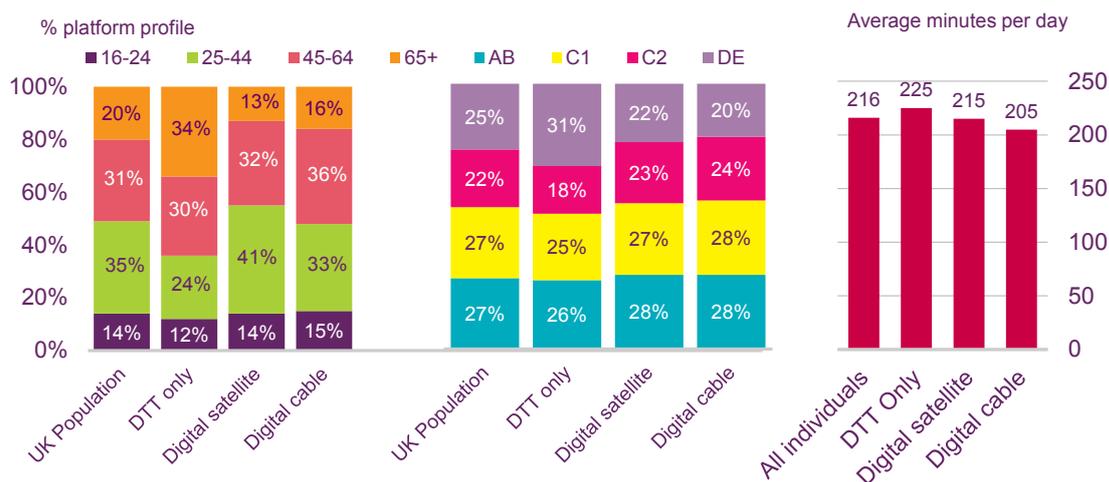
Digital terrestrial TV = digital TV through an aerial (this could include Freeview, BT TV/ TalkTalk/ YouView) and not through DSAT/DCAB or other platforms.

IPTV digital terrestrial only = receives digital terrestrial TV through any of BT TV/ TalkTalk/ YouView (but may have Freeview integrated TV) and not DSAT/DCAB/other platforms.

### Digital terrestrial households have an older age profile than those with satellite or cable

Figure 2.35 looks at the demographic profile of homes, by platform, alongside the daily hours of viewing of people in those homes. It shows that digital terrestrial-only households have an older age profile than either digital satellite or digital cable, and compared to the UK population average. Because time spent watching broadcast television increases with age, digital terrestrial-only viewers also watch more TV than those in other types of homes. Individuals in digital cable homes watched the least amount of TV, on average.

**Figure 2.35 Platform demographics by age, socio-economic group and viewing hours**



Source: Platform profile: Ofcom Technology Tracker H1 2016. Average minutes: BARB 2015 data

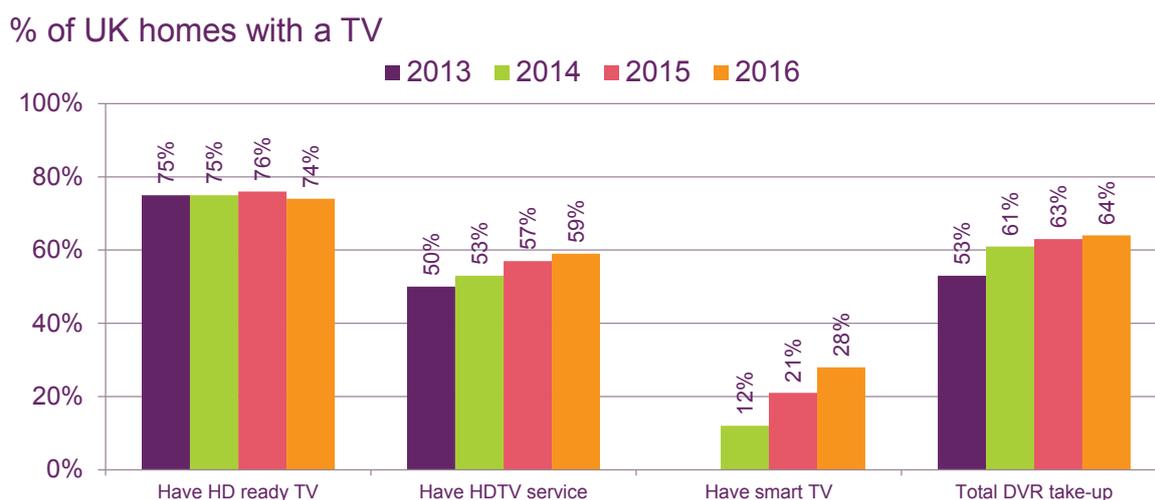
### Three-quarters of homes now have an HD-ready TV set but only six in ten TV homes have HDTV services

Over the past four years, the penetration of HDTV sets has remained broadly unchanged. Three-quarters (74%) of TV homes own a HDTV set in 2016. However, only six in ten TV homes (59%) say that they have an HDTV service. The take-up of HDTV services appears to be slowing even further, with only a two percentage point increase, from 57% in 2015 to 59% in 2016. The difference between those with an HDTV set and those with an HDTV service might be because households which replace their TV have no other choice than to buy an HDTV set, but are not actively choosing HDTV services.

Around two-thirds of TV homes (64%) have access to a digital video recorder (DVR). This figure increased by only one percentage point, from 63% in 2015, suggesting that take-up of DVRs may be slowing further. Of all adults who say they own a DVR, around one in five (22%) say they use it to watch recorded programmes every day.

Three in ten TV households (28%) say they have at least one smart TV. The take-up of smart TVs appears to be growing, with a significant increase of seven percentage points from 21% in 2015 to 28% in 2016. However, the use of a television connected to the internet (through any means) is likely to be higher, as we explore below.

**Figure 2.36 Take-up of HDTV sets and HD services, smart TVs and DVRs**



Source: Ofcom Technology Tracker, data as at Q1 2014, then H1 2015-2016

Base: All adults aged 16+ with a TV in the household: 2013 (3661), 2014 (3635), 2015 (3616), 2016 (3606)

QH53: Is the main TV in your household an HDTV set or HD ready? / QH54: Although you have an HDTV-ready set, to actually watch TV channels and programmes that are broadcast in high definition, you need an HD set-top box or a TV with built-in HDTV receiver. For the main TV set, does your household have an HDTV service - from either Sky, Virgin Media, Freesat or Freeview?

QH62: Are any of your TV sets 'smart TVs'?

QR1A: Does your household have Sky+? / QR1B: Does your household have Virgin TiVo (pronounced tee-vo) or V+? / QR1C/D/E: Does your Freesat/ Freeview box or Freeview TV/ broadband TV service allow you to record and store TV programmes, and also pause and rewind live TV programmes?

### Smart TV:

'Smart TV' refers to a stand-alone television set with inbuilt internet functionality. Users connect to the internet via a broadband router or modem. Smart TVs are produced by consumer electronics manufacturers including Samsung, Sony, Panasonic and LG. The definition does not include television sets connected to the internet via a third-party device such as a set-top box, a games console or a laptop/PC.

### Connected TV:

'Connected TV' refers to a television that is broadband-enabled to allow viewers to access internet content. This includes smart TVs as well as a TV connected by an external device such as a set-top box, games console, tablet, Blu-ray/DVD player or internet-connected dongle.

### An estimated six in ten households have a connected TV

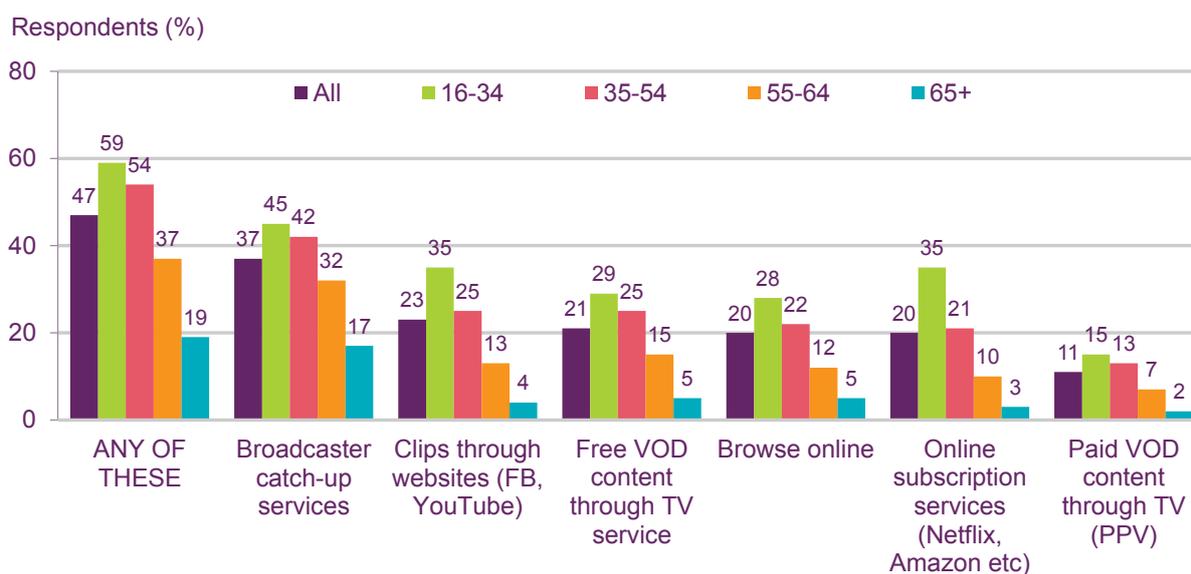
As Figure 2.36 shows, nearly three in ten TV households (28%) say that they have a smart TV – a television that connects to the internet directly. Research conducted by media consultancy 3 Reasons shows that around 62% of UK TV homes had a TV connected to the internet via a set-top box or a smart TV, at the end of 2015. The figure for households with a connected TV could be even higher once devices such as games consoles and dongles are included.

Figure 2.37 shows some of the activities most commonly undertaken by adults using their connected TV. Almost half of all adults (47%) have undertaken any internet activity on their TV, with a 40 percentage point difference between those aged 16-34 (59%) and those aged 65+ (19%).

Around four in ten adults (37%) with a connected TV watch TV programmes or films through a catch-up service provided by a broadcaster. Of these, three-quarters of adults (75%) said this was to catch up on a programme/film which they missed when it was originally shown.

Paid-for or subscription service content is more popular among younger people. One in five adults (20%) watch films or programmes through an online subscription service (e.g. Netflix, Amazon Instant Video), rising to 35% among the youngest viewers (16-34s).

**Figure 2.37 Activities undertaken on a connected TV, by age**



Source: Ofcom Media Tracker 2015.

Base: All respondents in 2015 (2,107); aged 16-34 (620), 35-54 (675), 55-64 (344), 65+ (468).

Q7/ Q9C/ Q10C/ Q11C/ Q13 - And which, if any of these devices have been connected to your home broadband service as well as a TV set in the home in the last 12 months to view something on the TV screen? Q14A-H/ Q15 - Which, if any, of these activities have you used your device for in the last 12 months when connected to a TV?

## 2.3.2 Recent changes in TV viewing

### Broadcast TV viewing

BARB analysis is based on viewing to scheduled TV programmes such as those listed in TV listings magazines or on electronic programme guides (EPG) on TV sets. It includes time-shifted viewing of these programmes. Together these make up the official industry measure of viewing, often referred to as **gold standard data**, on which our analysis is based. Viewing is reported for people aged 4 and above.

### Time-shifted viewing

'Time-shifted' viewing is defined by BARB as viewing of programmes recorded and subsequently played back on a television set within seven days of live broadcast, as well as viewing after pausing or rewinding live TV. Recording devices included in BARB analysis include video cassette recorders (VCR); DVD recorders (which store programmes on writable DVDs); digital video recorders (DVRs) which use a hard disk to store programmes chosen from an electronic programme guide, and combination devices (which use a combination of internal hard disk and removable DVDs to store programmes).

Viewing any catch-up TV player services through the television set is also captured under 'time-shifted viewing' if the content has been broadcast live in the past seven days. This includes catch-up player services accessed through apps on smart TVs and games consoles, and viewing on any device such as laptops, personal computers or tablets, as long as they are connected to the television set.

Viewing outside the seven-day window, viewing catch-up services on devices that are not connected to the TV set, and video on-demand (VoD) services (such as Amazon Instant Video and Netflix) which have not been scheduled on a television channel, are not reported as time-shifted viewing.

### Non-gold standard data

Besides the gold standard data sets, BARB also makes available other data that they are able to collect. One of these is **time-shifted viewing between 8 and 28 days** after the initial broadcast. Another is **unmatched data** which refers to activities when the TV set is in use but the content cannot be audio-matched or otherwise identified. This would include the TV being used for gaming, viewing DVDs/ box-sets/ archives, subscription video-on-demand (SVoD), time-shifted viewing beyond 28 days, apps on smart TVs and navigation around EPG guides where there is no in-picture live content. Digital radio stations via the TV are also part of unmatched viewing (these are reported by RAJAR). Unmatched viewing has been reported by BARB since July 2013.

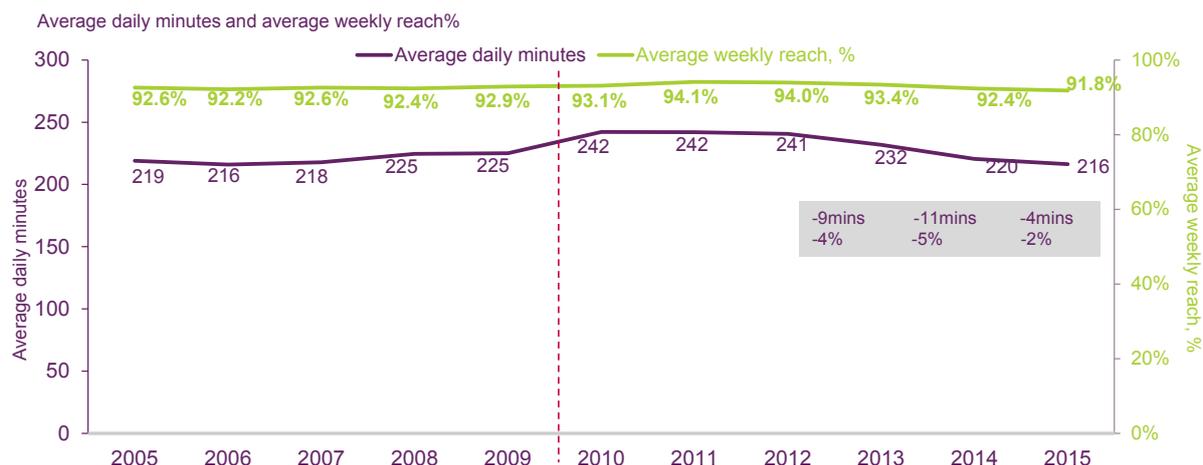
We include some analysis of non-gold standard data to put the measured TV viewing analysis into context.

### Time spent watching broadcast TV fell for a third consecutive year but the rate of decline has slowed, and weekly reach remains high

Daily viewing time to TV was 3 hours 36 minutes in 2015, four minutes less than in 2014. This represented a slowing of the decline which began in 2012, when time spent watching TV fell after holding steady at around four hours a day since 2010.

Ninety-two per cent of the TV population watched TV at least once in a typical week in 2015. The slight year-on-year decline was marginally less than the fall between 2013 and 2014. Weekly reach has been falling incrementally since 2011 but the majority of people continue to tune in to TV, and reach is broadly the same as a decade ago.

**Figure 2.38 Average weekly reach and average daily minutes of broadcast TV: 2005-2015**



Source: BARB, individuals 4+, network, total TV. Reach criterion = 15 consecutive minutes of viewing at least once in the average week. Full weeks used for the correct calculation of averages.

Note: New BARB panel introduced 1 Jan 2010. As a result pre- and post-panel change data must be treated with caution (see dotted line).

### The rate of decline eased for all age groups except 16-24 year olds

The slowing decline in viewing was driven by all age groups to varying degrees. The exception was among 16-24 year olds, for whom the decline increased even more, while over-65s watched two minutes more TV a day.

Analysis of longer-term shifts in viewing by age group is explored later in the *Broadcast TV viewing trends* section.

**Figure 2.39 Change in average minutes per day of TV viewing, by age group: 2013-2015**

| Audience              | Change 2013-2014   | Change 2014-2015  | % change 2013-2014 | % change 2014-2015 |
|-----------------------|--------------------|-------------------|--------------------|--------------------|
| Adults 65+            | -1 minute          | +2 minutes        | -0.3%              | +0.5%              |
| Adults 55-64          | -10 minutes        | -2 minutes        | -3.4%              | -0.6%              |
| Adults 45-54          | -11 minutes        | -5 minutes        | -4.4%              | -2.2%              |
| <b>Individuals 4+</b> | <b>-11 minutes</b> | <b>-4 minutes</b> | <b>-4.9%</b>       | <b>-1.9%</b>       |
| Adults 35-44          | -17 minutes        | -5 minutes        | -8.0%              | -2.4%              |
| Adults 25-34          | -16 minutes        | -7 minutes        | -8.8%              | -4.2%              |
| Adults 16-24          | -9 minutes         | -15 minutes       | -6.2%              | -10.5%             |
| Children 4-15         | -17 minutes        | -6 minutes        | -12.4%             | -5.4%              |

Source: BARB.

## As in previous years, all of this decline was in watching live at the time of broadcast

As in the past two years, the entire decline in broadcast TV viewing was to live TV<sup>46</sup> in 2015. There was a five-minute drop in live TV viewing, while seven-day time-shifted viewing increased by two minutes. This offset of recorded and catch-up viewing resulted in the four minute overall decline.

Since 2010, there have been annual falls in time spent watching live TV. Time-shifted viewing was largely able to compensate for the losses in live TV until 2012, but from 2012 onwards, there have been large annual decreases in watching at the scheduled time, while recorded and catch-up has remained largely static. This has resulted in an overall decline in TV viewing.

We consider how 8-28 day time-shifted viewing has affected Gold Standard figures later in the chapter.

**Figure 2.40 Average minutes of viewing per day, by activity: total TV**



Source: BARB, individuals 4+, network, total TV. Average minutes of viewing per day. Refer to the definitions box for explanation of time-shifted viewing. Chart figures may not add up due to rounding. Note: New BARB panel introduced 1 Jan 2010. As a result pre- and post-panel change data must be treated with caution (see dotted line).

## Sport had the largest decline in total viewing minutes in 2015, following 2014's football World Cup in Brazil

Of total viewing hours (live and time-shifted) across all channels by programme genre, sport had the largest decline in viewing in 2015 compared to 2014. In 2014, the football World Cup year, 15 of the top 20 most-watched programmes, in terms of time spent, were sports, and the World Cup featured in ten of these. The long programme duration of the matches, which attracted high total viewing minutes, shows that people invested time in this coverage. In contrast, in 2015 fewer (11) of the top 20 most-watched programmes, in terms of time spent, were sports programmes although sports viewing was bolstered by the Rugby World Cup and Rugby Six Nations, which featured in six of the top ten most-watched sports programmes.

<sup>46</sup> Watching live at the scheduled time and not just to live events such as football matches, for example.

Other genres for which viewing time fell in 2015 included cinema films, comedy, entertainment and drama, all genres most associated with on-demand viewing.

**Figure 2.41 Viewing by genre across all channels: 2010-2015**

Total hours per person per year



Source: BARB, individuals 4+, network programming based on 4+ area filter, total TV. Total hours of viewing per year. Note: There have been large increases in total viewing hours to the 'other: new programme' genre over the last few years. Programmes that fall into other genres may be coded as 'other: new programme'.

### Sports and event programming, the weather, and technological and AV service innovations may explain these declines

The impact of sports programming, along with key national events, may partly explain why the decline in daily viewing has been so high since 2012.

Between 2010 and 2012, when daily viewing was four hours per day, there was some notable 'appointment-to-view' programming, which may have artificially inflated viewing figures. There was less event programming in 2013, and England's lack of success in both the football World Cup in 2014 and the rugby World Cup in 2015 meant both events may not have had the same impact as they could have done on total TV viewing.

As well as events programming, the performance of other formats, such as hit TV shows, can dramatically impact TV viewing. The weather can also influence viewing; people spend more time on other pursuits in warmer weather. Average temperatures were cooler in 2015 than in 2014, and this may be a factor in the slower year-on-year decline.

Against the backdrop of a rapidly changing viewing landscape, other factors that might affect viewing to broadcast TV include the availability of on-demand programmes and films, which are available to view on a range of devices at any time the user desires. The proportion of GB adults claiming to use on-demand services accelerated between 2010 and 2013 but slowed considerably between 2014 and 2015: this may have been a factor in the slower decline in 2015.

Since July 2013, it has been possible to see what the TV set is used for, other than watching scheduled TV up to seven days after broadcast. We now consider the role that these TV set-related activities play, in relation to conventional seven-day industry data.

## The 2015 decline may have been replaced by 8-28 day time-shifted viewing and to other activities on the TV set

In 2015 there were an additional 35 minutes of TV activity time per day, on top of the 3 hours 36 minutes that we know about (the Gold Standard seven-day industry data). This was similar to 2014, when 32 minutes per day were spent on other activities on the TV set.

Although the amounts are similar, the shift in the distribution of these minutes is of interest. There was a four-minute fall in seven-day viewing data (boxed in red in Figure 2.42). At the same time there was a one-minute increase in 8-28 day time-shifted viewing, and a larger three-minute increase in unmatched viewing (which can include subscription VoD like Netflix, apps on smart TVs and gaming). This suggests that all of the decline in measured viewing may have migrated to other activities on the TV set rather than to other screens.

**Figure 2.42 Average daily minutes of TV screen time, total TV, by activity type: 2014-2015**



Source: BARB, individuals 4+. Average minutes of viewing per day.

\*Note: Unmatched: TV in use but content cannot be audio-matched or otherwise identified. Includes gaming, viewing to DVDs/ box sets/archives, SVoD, time-shifted viewing beyond 28 days, apps on smart TVs and navigation around EPG guides where there is no in-picture broadcast content. Chart figures may not add up due to rounding. The majority of unreported viewing time came from the TV set or games consoles.

## The majority of unmatched viewing time is spent on games consoles and connected TVs

In December 2015 BARB began analysing which devices were being used for measured and non-measured TV activities, in order to better understand what else the TV screen is being used for.

Analysis of January to May 2016 data gives us an indication of the range of devices used, and therefore the type of activity that people are engaged in.

It shows that all individuals, and 16-24 year olds, spent a similar proportion of their unmatched viewing time using TV sets with apps, such as smart TVs (around a fifth). Almost half of the 50 minutes of unmatched viewing time among 16-24 year olds was spent on games consoles, with the remainder of their time spread across other devices such as Virgin Media's TiVo box (5%), Sky PVR (4%) and connected set top-boxes including YouView (3%). Games consoles were also popular among the general population, with an equal proportion of time spent using them as using the TV. But considerably less of their total

unmatched viewing time was on games consoles, compared to 16-24s, with larger proportions distributed across other devices, compared to 16-24s.

**Figure 2.43 Unmatched viewing on the TV set, by device used: January-May 2016**



Source: BARB. Unmatched viewing by device use, based on average daily minutes of viewing. 1/1/2016 to 31/5/2016 (34 mins for individuals and 50 mins for adults 16-24).

Next we consider the longer-term trends in traditional broadcast TV viewing.

### 2.3.3 Broadcast TV viewing trends

#### TV viewing is driven by older audiences

TV viewing varies greatly by age; people watch more TV as they get older and move through different life stages. Children watch the least television (just under two hours a day in 2015) while the oldest (65+) age group watched the most: almost three times as much, at 5 hours 42 minutes a day. Over time, the profile of broadcast TV has grown older.

#### TV viewing has fallen considerably in the last five years, with a widening gap in the viewing habits of the youngest and oldest audiences

Time spent watching TV has dropped in the last five years; 26 minutes a day less (11%) than in 2010.

While viewing fell across all age groups, there were above-average falls for the under 45s. As the lightest viewers generally, the biggest shifts in viewing were among 16-24s and children, for whom viewing dropped by 27% and 26% respectively. The most stable viewing levels were among the 55-64 and over-65 audiences (down by 5% and 0.2% respectively).

In the past year, the accelerated decline in viewing since 2012 has slowed, for all age groups under 65, with the exception of the 16-24s. For this age group the rate of decline continued to speed up (-10.5%), the biggest annual drop for this age group since 2010.

Across the decade, daily viewing looks buoyant at an all-individuals level, but the oldest viewer groups are driving viewing (which has increased since 2005) with marked declines among all other age groups aged under 45.

**Figure 2.44 Average daily minutes to total TV, by age group: 2005-2015**



Source: BARB, network total TV. Average minutes of viewing per person per day. New BARB panel introduced 1 Jan 2010. As a result pre- and post-panel change data must be treated with caution (see dotted line).

### TV reaches 92% of the TV population in a typical week

The majority of people watch TV at least once in a typical week. But, proportionally, more of the older TV population tune in weekly than the younger age groups (under 35).

In 2015, weekly reach ranged from 82% among 16-24 year olds to 95% or more among over-45 groups. Similar to time spent viewing, weekly reach has fallen, among all age groups, since either 2011 or 2012, with the steepest decline among 16-24s and children.

In the longer term, the proportion of each age group who tune into TV in a typical week has remained broadly level, falling between 2 and 3 pp among children and 16-24s over the past decade, while it has increased by around 0.5pp among over-45s.

**Figure 2.45 Average weekly reach of total broadcast TV, by age group: 2005-2015**

|      | Individuals 4+ | Children (4-15) | Adults 16-24 | Adults 25-34 | Adults 35-44 | Adults 45-54 | Adults 55-64 | Adults 65+ |
|------|----------------|-----------------|--------------|--------------|--------------|--------------|--------------|------------|
| 2005 | 93%            | 90%             | 84%          | 92%          | 94%          | 95%          | 96%          | 96%        |
| 2006 | 92%            | 89%             | 83%          | 92%          | 94%          | 94%          | 95%          | 96%        |
| 2007 | 93%            | 91%             | 83%          | 92%          | 94%          | 95%          | 96%          | 96%        |
| 2008 | 92%            | 90%             | 82%          | 91%          | 94%          | 95%          | 96%          | 96%        |
| 2009 | 93%            | 91%             | 83%          | 92%          | 94%          | 96%          | 96%          | 96%        |
| 2010 | 93%            | 90%             | 85%          | 91%          | 95%          | 96%          | 96%          | 97%        |
| 2011 | 94%            | 92%             | 87%          | 93%          | 95%          | 96%          | 97%          | 97%        |
| 2012 | 94%            | 92%             | 86%          | 93%          | 95%          | 96%          | 97%          | 97%        |
| 2013 | 93%            | 91%             | 85%          | 92%          | 94%          | 96%          | 97%          | 97%        |
| 2014 | 92%            | 88%             | 83%          | 90%          | 94%          | 95%          | 96%          | 97%        |
| 2015 | 92%            | 87%             | 82%          | 89%          | 93%          | 95%          | 96%          | 97%        |

Source: BARB, total TV.

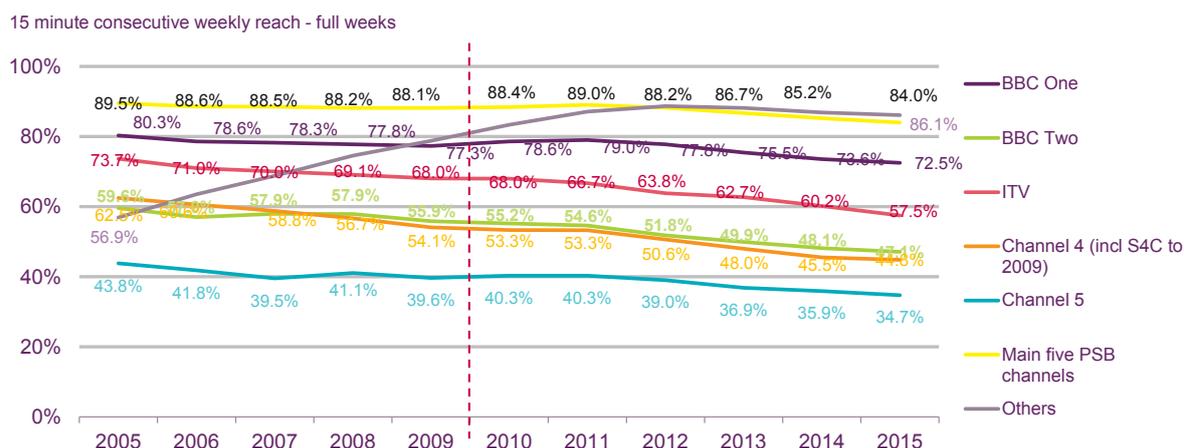
**The combined reach of the main five PSB channels is comparable to the reach of all other remaining channels in the UK combined**

Overall, the main PSB channels' weekly reach appears resilient. Despite increased competition from other channels, eight in ten people continued to watch at least one of the five PSB channels in a typical week in 2015. In ten years, the weekly reach of the main PSBs has decreased by just 5pp, although this is proportionately more than the fall in weekly reach to TV as a whole (1pp).

As the selection of channels available to watch increased, the combined weekly reach of all channels, apart from the main five PSBs, grew substantially; from 57% in 2005 to 86% in 2015, slightly below the 84% weekly reach of the main five PSBs combined. In 2012, the weekly reach to this group of channels overtook the combined reach of the main PSBs. The combined reach of both channel groups began to dip from 2012 onwards, although the decreases to the 'other' channels were not as much as the decreases to the main PSBs.

By individual channel, the biggest losses in weekly viewing were to Channel 4 and ITV across ten years. The most stable, comparatively, were BBC One and Channel 5. More recently, while weekly reach fell for each main PSB channel year on year, the least pronounced falls were to Channel 4, and the most, to ITV.

**Figure 2.46 Average weekly TV reach, by channel: 2005-2015**



Source: BARB, individuals 4+, Network. Note: A new BARB panel was introduced in 2010. As a result, pre- and post-panel change data must be compared with caution. Note: Following digital switchover in Wales in 2010, S4C ceased to carry Channel 4 content. S4C is therefore included in the Channel 4 figure in and prior to 2009 but not from 2010 onwards. S4C weekly reach in 2014 was 0.5% (all homes). The main five PSB channels include viewing to their HD channel variants but exclude viewing to their +1 channels.

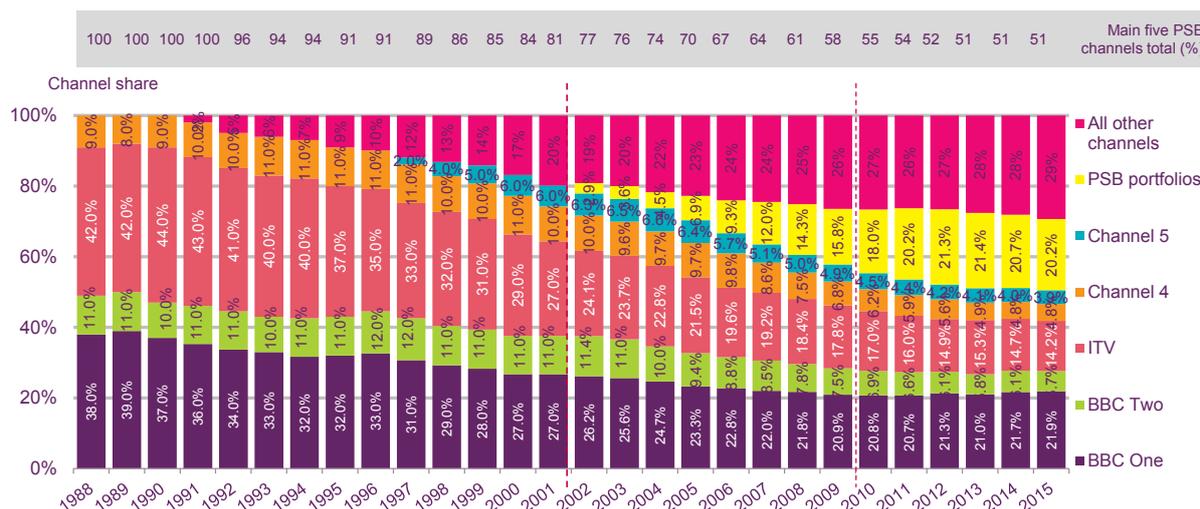
### The main five PSBs have retained a majority share of viewing

The number of BARB reported channels in the UK grew from five in 1988 (BBC One, BBC Two, ITV, Channel 4 and S4C) to 316 in 2015. In the face of this, the main five PSB channels had retained over half of the total broadcast TV audience in 2015. Added to their portfolio of targeted channels such as BBC Four, ITV2 and E4, the PSB broadcasters accounted for over two-thirds of viewing.

Year on year, BBC One continued to perform well, marginally increasing share and continuing to account for around a fifth of total TV viewing. Channel 4 held its share for the third consecutive year and Channel 5's share continued to dip. Share declined by around one percentage point for ITV, while BBC Two's share fell to a lesser degree.

As shown in Figure 2.48, 11 of the PSB portfolio channels were in the top 20 most watched channels (ranked by share) in 2015, along with the main five PSBs.

**Figure 2.47 Channel shares in all homes: 1988-2015**



Source: BARB, TAM JICTAR and Ofcom estimates, individuals 4+. Notes: a new BARB panel was introduced in 2002 and 2010, as a result, pre- and post-panel change data must be compared with caution (see dotted line); following digital switchover in Wales in 2010 S4C ceased to carry Channel 4 content, S4C is therefore included in the Channel 4 figure in and prior to 2009 but not from 2010 onwards; the main five PSB channels include viewing to their HD channel variants but exclude viewing to their +1 channels.

### The top 20 channels generally reflect the older profile of traditional TV

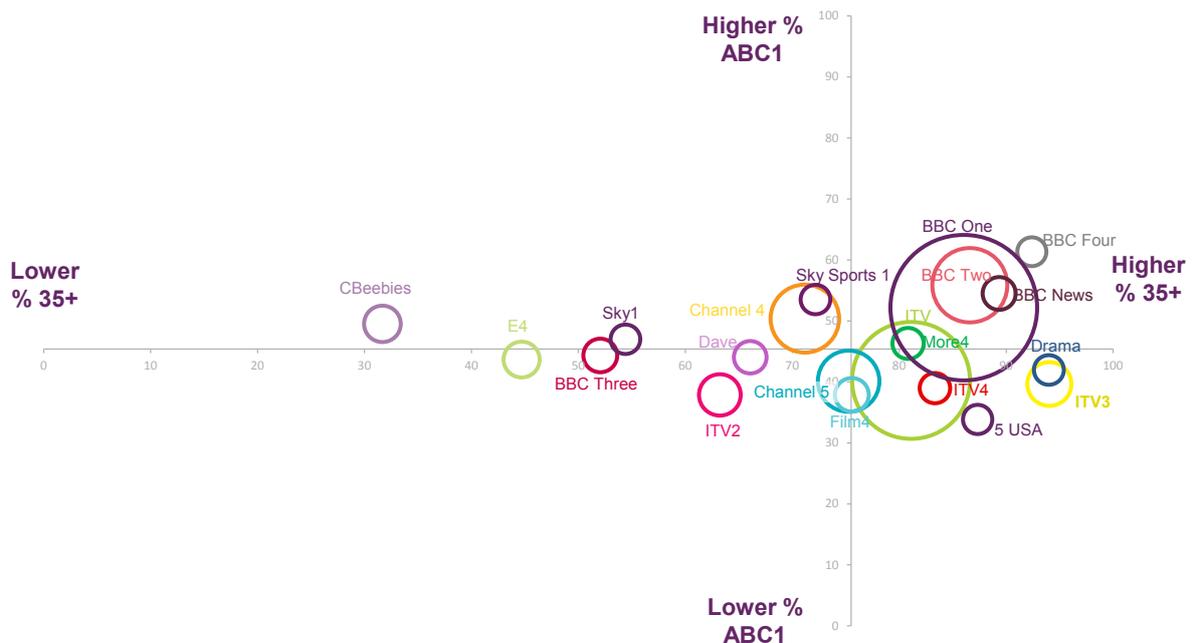
Figure 2.48 plots the age and socio-economic (SEG)<sup>47</sup> profile of the 20 most-watched channels in 2015, relative to the 35+ age and ABC1 SEG profile of viewers to total TV. It also shows the share of each channel, depicted by the size of the bubbles. The profile of a channel gives an indication of its target audience, and for commercial channels, this is used to sell advertising.

Reflecting the older profile of TV overall (76% of viewers are aged 35+), the majority of the top 20 channels in 2015 had audiences that skewed older or the same as the average. Apart from the dedicated children’s channels from the BBC (CBeebies and CBBC) the channel with the youngest profile overall was E4 (55% of its audience was aged under 35) while the channels with the oldest profile of all the top 20 channels were ITV3 and Drama (94% of their audience was aged 35+). Channels from the BBC, Sky and Channel 4 attracted higher proportions of ABC1 audiences to their channels compared to the proportion of ABC1 viewers to TV generally (45%).

Of the main five PSBs, BBC One and BBC Two had the oldest viewing profiles, and the highest proportions of ABC1 viewers. Channel 4’s audience had the youngest profile and the highest proportion of ABC1s relative to the other commercial PSBs.

<sup>47</sup> A classification of household social status based on the occupation of the chief income earner. BARB reports the following social grades: AB – higher (A) or intermediate (B) managerial, administrative or professional; C1 – supervisory or clerical and junior managerial, administrative or professional; C2 – skilled manual workers; D – semi-skilled and unskilled workers; E – state pensioners, casual or lowest grade workers;

**Figure 2.48 Age and socio-economic audience profile of the 20 most viewed channels: 2015**



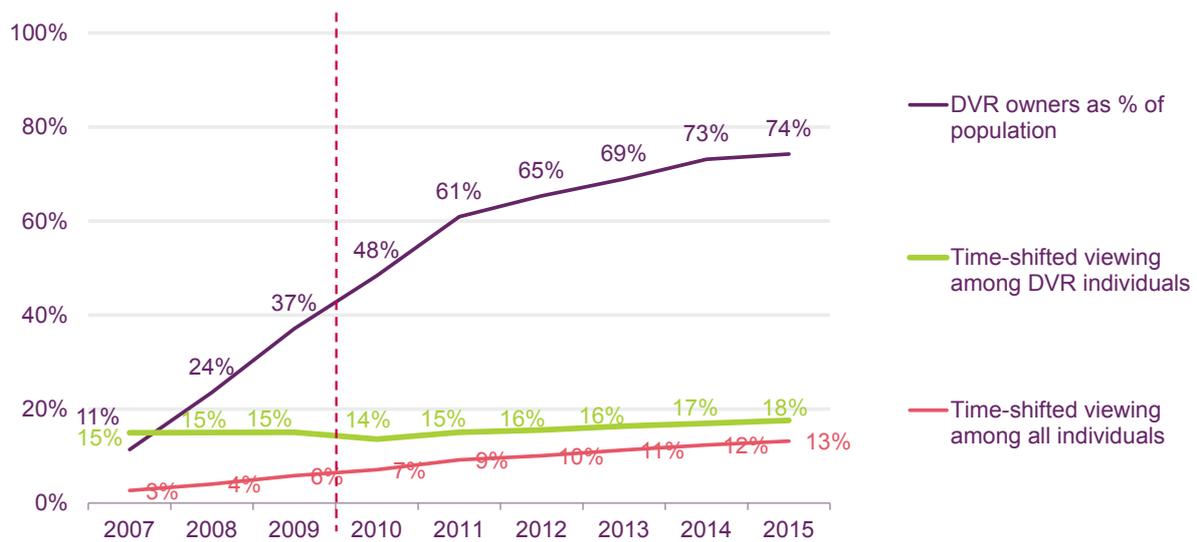
Source: BARB/InfoSys+/TRP Research. Based on the top 20 channels ranked by share, excluding individually reported +1 channels. Profile based on age: % 35+, SEG: % ABC1 individuals. Axes cross at the average age/SEG profile of Total TV. Includes HD variants where applicable.

### Time-shifted viewing is slowing

In the earlier *Recent changes in TV viewing* section, analysis of the fall in time spent watching TV showed that all of the annual declines since 2012 was to viewing live at the time of broadcast. Before then, losses in live viewing minutes were compensated for by similar rates of increase in seven-day time-shifted viewing. But in the last three years the growth in time spent watching programmes other than at the time of broadcast has slowed considerably to around one to two minutes per day per year.

Figure 2.49 demonstrates this slow growth across the longer term, among the general population (including those who do and do not own a DVR) and specifically among those who own a DVR. The steep growth in DVR take-up, from 11% in 2007 to 74% in 2015, has not translated into a radical shift away from viewing live TV. The viewing habits of people who own a DVR has remained relatively unchanged over time, with time-shifted viewing accounting for a generally constant proportion of their broadcast TV viewing time. The more pronounced rise in time-shifted viewing among the general population can be explained by the increased adoption of DVRs and devices such as smart TVs or games consoles (which offer access to catch-up services without the need for a recording device).

**Figure 2.49 DVR take-up and time-shifted viewing: all individuals, and individuals in DVR homes: 2007-2015**



Source: BARB, Network. New BARB panel introduced 1 Jan 2010. As a result pre- and post-panel change data must be treated with caution (see dotted line).

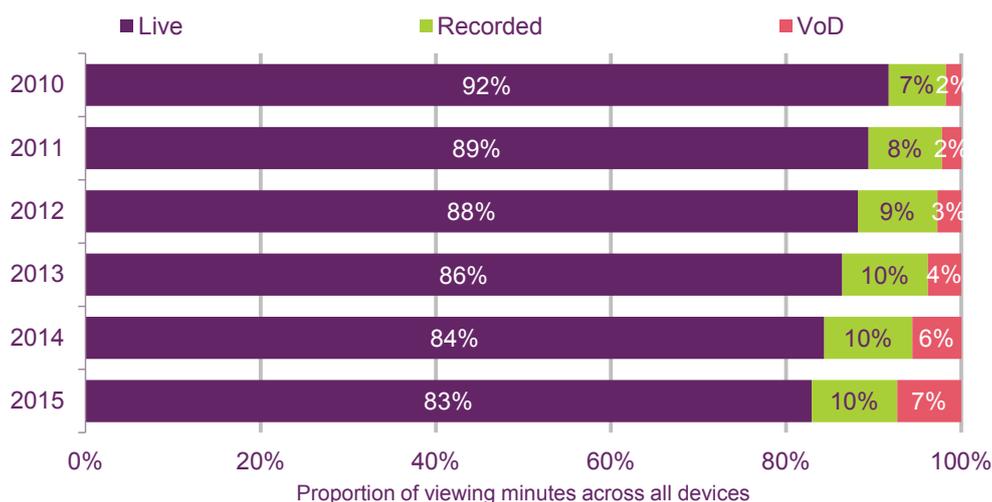
### Live broadcast TV accounted for 83% of programme viewing time across all screens, but is falling

There is currently no industry standard measure of viewing to all programmes and films across all devices beyond the TV set. We therefore use a range of sources (such as our Digital Day research presented earlier in the chapter, and industry estimates) to understand viewing across live, on-demand (catch-up and paid) and time-shifted content.

3 Reasons estimates of legal, long-form viewing across all devices, show that people spend the majority of their viewing time watching live TV (83%) with time-shifted viewing (10%) more popular than on-demand (7%).

With people connected to the internet more than ever, and take-up and use of on-demand services growing, time spent watching live TV has fallen from an estimated 92% of viewing in 2010. At the same time, viewing of recordings or on-demand has progressively grown, almost doubling since 2010 to 17% in 2015. The proportion of time spent watching recorded programmes has been flat over the last three years, but VoD continues to grow.

**Figure 2.50 Proportion of all AV viewing: live TV, DVR and VoD: 2010-2015**



Source 3 Reasons estimates (including BARB data). Base: all devices, long-form professional audio-visual content. Live includes simulcast. Excludes physical consumption (e.g. DVDs) and short-form.

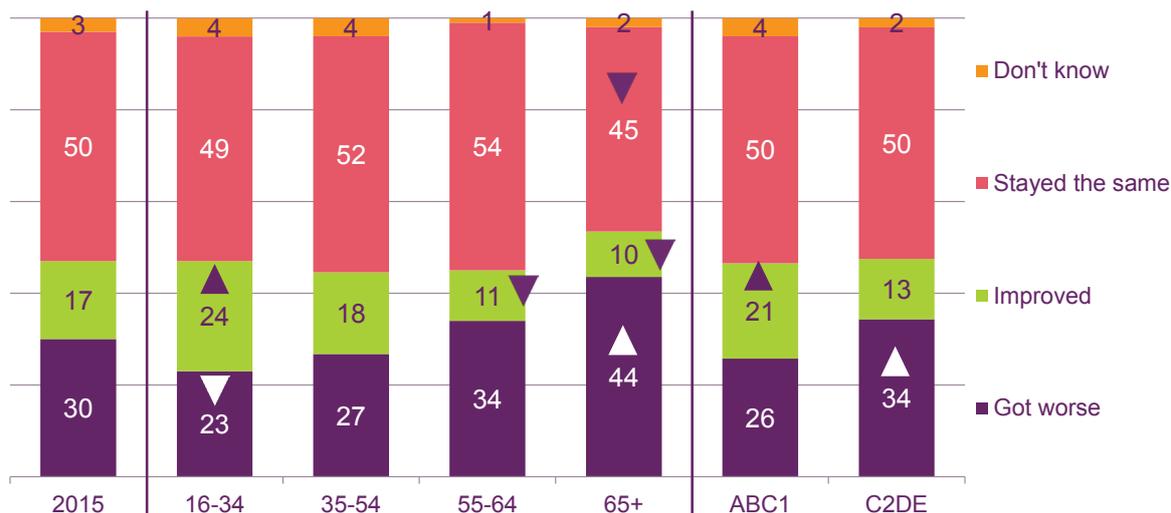
### 2.3.4 Consumer attitudes to television

#### Half of adult viewers feel that the quality of programmes has stayed the same over the past year

Ofcom's 2015 Media Tracker research shows that half of adult viewers in the UK (50%) felt that the quality of television programmes had stayed the same over the past 12 months. Three in ten adults (30%) said they felt that quality had worsened, while almost two in ten adults (17%) felt there had been some improvement.

As shown in Figure 2.51, there was a split between the youngest and oldest viewers as to whether programme quality had improved or worsened. The youngest viewers (16-34s) were the most likely of all age groups to say that programme quality had improved (24%) while 44% of viewers over the age of 65 said they felt programme quality had got worse. Viewers in the C2DE socio-economic group were more likely than those in the ABC1 group to say that the quality of programmes had got worse (34% vs. 26%).

**Figure 2.51 Opinion on the quality of programmes over the past 12 months (% of adults with a TV)**



Source: Ofcom Media Tracker, 2015.

Q20 - Do you feel that over the past year television programmes have improved, got worse or stayed about the same?

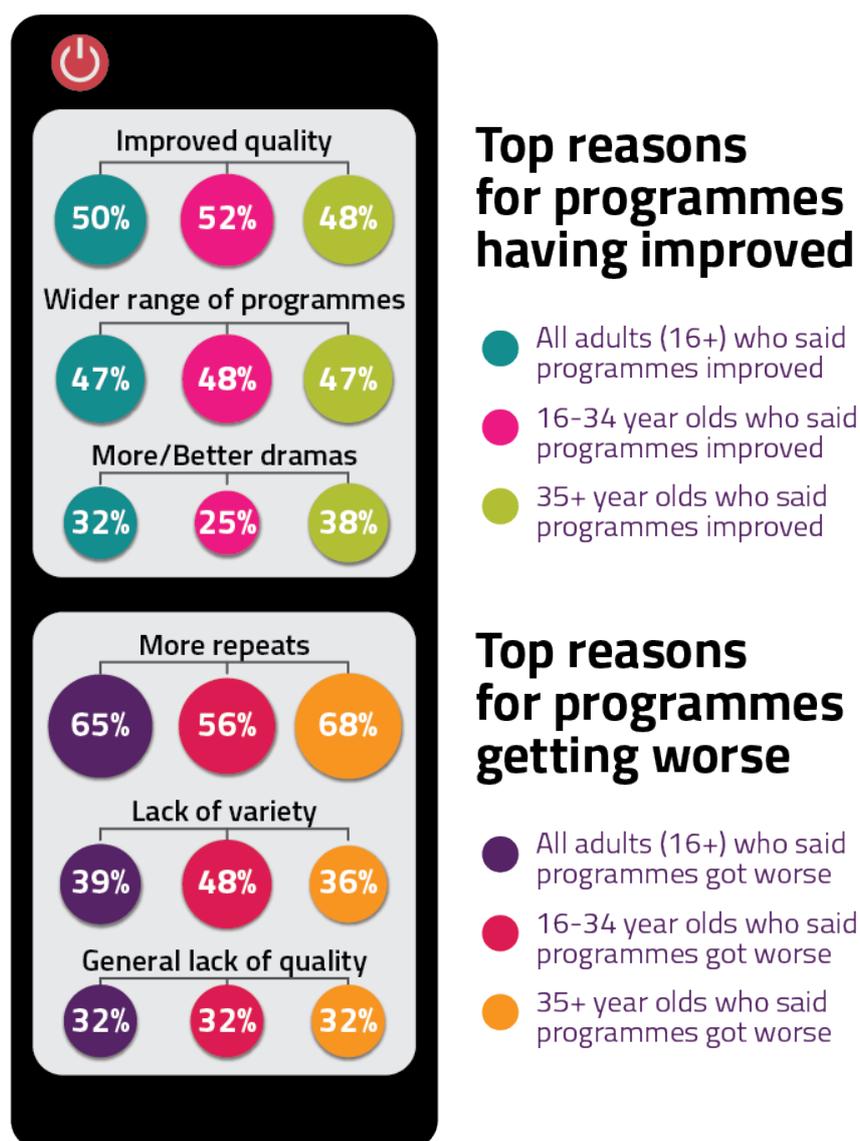
Base: All with any TV sets in 2015 (2,052); aged 16-34 (589); 35-54 (666); 55-64 (335); 65+ (462); ABC1 (1,055); C2DE (993). Significance testing shows any difference between any age group and all adults and any difference between socio-economic groups.

### Among those who felt programmes had got worse, repeats were the most common reason given

Among those who said that they felt programmes had 'got worse', the most commonly stated reason was 'more repeats' (65%). Figure 2.25 shows that there were only slightly fewer original UK programmes broadcast by the main five PSB channels in 2015 than in the previous year. This was more often seen as a reason by viewers aged 35 and above (68% vs. 56%). Other common problems associated with worsening of programmes included 'lack of variety' (39%), 'general lack of quality' (32%) and 'too many reality shows' (28%). Around one in ten adults who thought programmes had got worse associated this decline in quality with bad language, sex or violence.

Among those who thought that programmes had improved, half felt that there had been 'improved quality' (50%) and a 'wider range of programmes' (47%). Other popular answers included 'more/better dramas' (32%) and 'more interesting/entertaining' programmes (30%).

Figure 2.52 Top reasons given for programmes having improved or got worse



Source: Ofcom Media Tracker, 2015.

Q21 - In what ways do you think that the television programmes have improved over the past year?

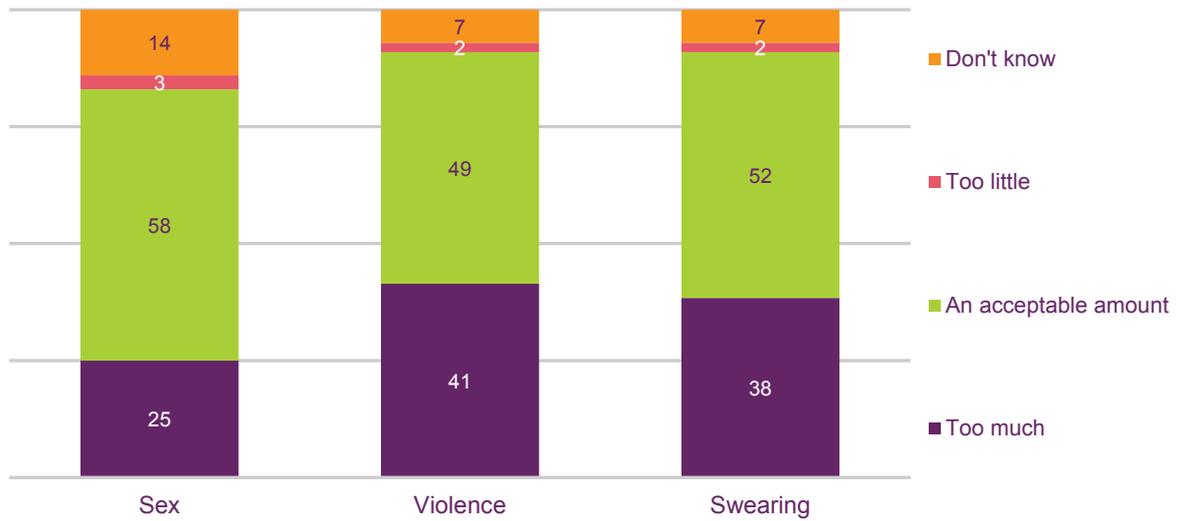
Q22 - In what ways do you think that the television programmes have got worse over the past year?

Base: All saying programmes 'improved' over past year (320); 16-34 (130); 35+ (190); All saying programmes 'got worse' over past year (646); 16-34 (139); 35+ (507) Unprompted, multicode.

### Around half of adult viewers believe there is an acceptable amount of sex, violence and swearing on TV

Figure 2.53 shows the opinions of viewers on the amount of sex, violence and swearing on TV. It shows that a quarter of viewers (25%) believe that there is too much sex on television while a higher proportion say that there is too much violence (41%) or swearing (38%). Less than one in 20 adults feel that there is too little sex, violence or swearing on TV.

**Figure 2.53** Opinion on the amount of sex, violence and swearing on TV among viewers



Source: Ofcom Media Tracker, 2015. Q46 - Do you think, in general, that there is too much, too little or an acceptable amount of each of the following on television: a) sex? b) violence? c) swearing?  
 Base: All with any TV sets (2,052). Prompted, single code.



# The Communications Market 2016

## 3 Radio and audio

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## 3.1 Key market developments in radio and audio

### 3.1.1 Sector overview

Radio remains resilient. As the oldest broadcast medium, since its creation at the turn of the 20th century, radio has witnessed each technological development that has brought different and competing media to consumers' media diets. The reach of radio is still high – almost 90% of adults tune in on a weekly basis – and time spent listening to radio increased in 2015.

But there are differences across age groups. While for all UK adults the majority of time spent listening to any audio is accounted for by live radio (71%), 16-24s spend similar amounts of time with live radio (29%), personal digital audio (26%) and streaming services (25%).

Sector revenues are also in good health. Overall, commercial stations increased their revenue in 2015, with overall growth of 1.4% to £519m, as national advertising offset overall declines in local advertising revenue. The two largest commercial radio groups both increased their numbers of listeners, and together now reach over 38 million UK adults each week.

BBC and commercial radio, community and short-term restricted service radio, broadcast across the UK, with most services broadcasting on the FM waveband. However, in 2015 over 40% of all reported radio listening was via a digital device. A second national DAB network of transmitters was switched on in March this year, bringing 15 unique radio services to 75% of the UK's population.

Community radio can now be heard in many parts of the UK, with 239 unique non-profit distributive radio services on air. The average annual cost of running one of these services is £55,000; typically half this expenditure is on staff costs. On average less than a third (30%) of income comes from on-air advertising and sponsorship.

**Figure 3.1 UK radio industry: key metrics**

| UK radio industry                       | 2010    | 2011    | 2012    | 2013    | 2014    | 2015    |
|---|---------|---------|---------|---------|---------|---------|
| Weekly reach of radio (% of population) | 90.6%   | 90.8%   | 89.5%   | 90.4%   | 89.5%   | 89.6%   |
| Average weekly hours per listener       | 20.1    | 20.5    | 22.2    | 21.5    | 21.4    | 21.4    |
| BBC share of listening                  | 55.2%   | 54.7%   | 54.7%   | 54.6%   | 53.8%   | 53.6%   |
| Total industry revenue*                 | £1,137m | £1,164m | £1,203m | £1,177m | £1,248m | £1,248m |
| Commercial revenue*                     | £452m   | £457m   | £475m   | £461m   | £512m   | £519m   |
| BBC expenditure                         | £675m   | £697m   | £717m   | £705m   | £725m   | £717m   |
| Community radio revenue                 | £10.0m  | £10.5m  | £10.8m  | £10.9m  | £11.5m  | £11.6m  |
| Radio share of advertising spend        | 3.3%    | 3.3%    | 3.3%    | 3.1%    | 3.2%    | 3.0%    |
| DAB digital radio take-up (households)  | 38.2%   | 42.6%   | 44.3%   | 47.9%   | 49.0%   | 55.7%   |
| Digital radio listening share           | 24.6%   | 27.8%   | 31.2%   | 35.6%   | 37.3%   | 40.7%   |

Sources: RAJAR (all adults age 15+), Ofcom calculations, based on figures in BBC Annual Report and Accounts 2015-16 note 2c ([www.bbc.co.uk/annualreport](http://www.bbc.co.uk/annualreport)), AA/Warc, broadcasters. Revenue figures are nominal. DAB take-up: Q1 of the following year. \*Commercial and total revenue figures for 2010-2013 are not wholly comparable to 2014 and 2015 due to an amendment to the data collection methodology. Digital listening share 12 months to December.

### 3.1.2 Radio resistance

#### 120 years of technological advances have shaped radio broadcasting

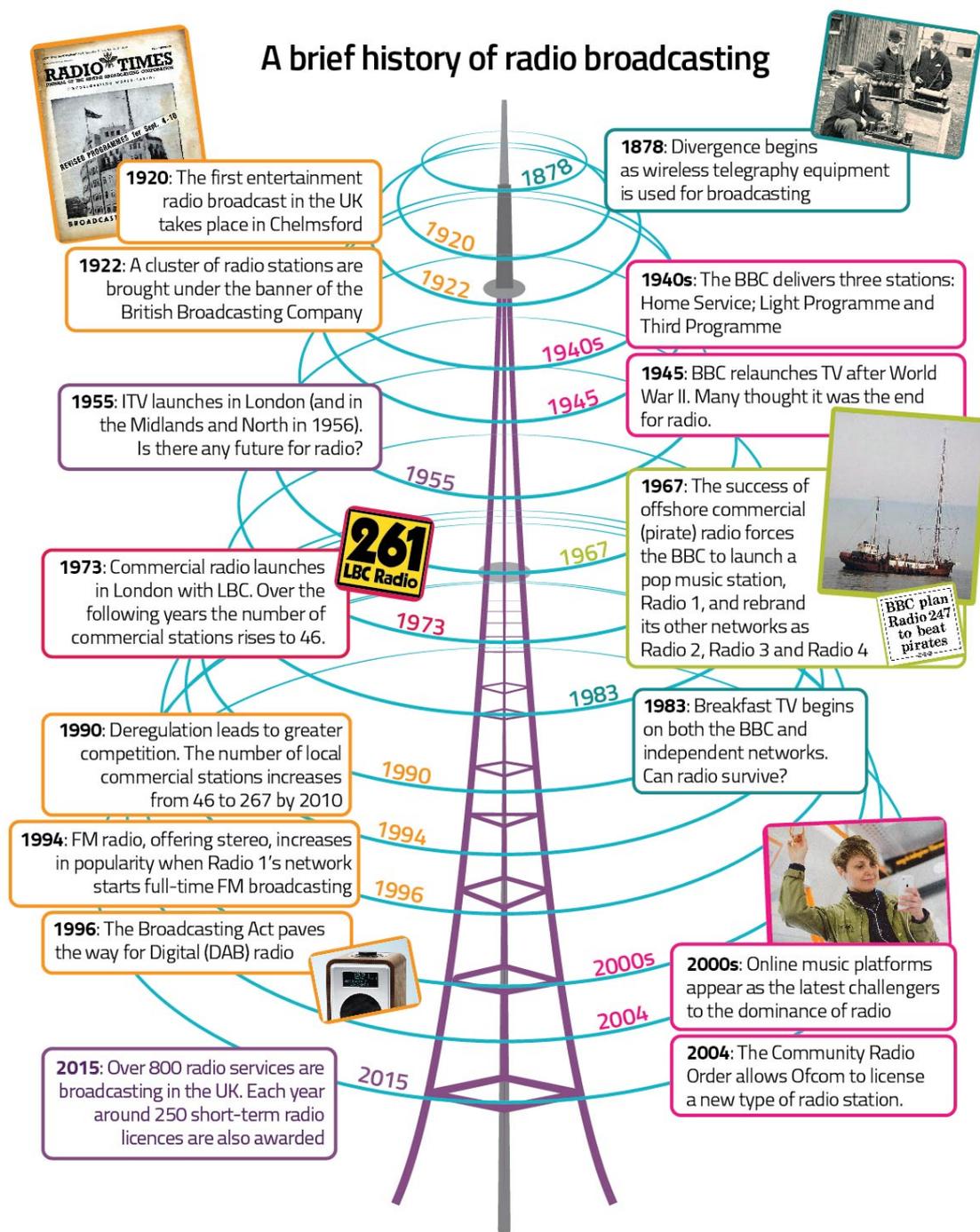
Radio's history has been shaped by technological developments which, in some cases, have led to increased competition in the oldest broadcast medium. Over this time, radio has proved to be resilient in retaining audience. Even in a digital world, the rise in internet-based activity – streaming and downloading in particular – has not materially affected broadcast radio's listening reach as a whole, in the same way that the internet, for example, has affected the national, regional and local press.

#### How radio got to where it is

In the late 1800s, divergence occurred when electronic communications, in the form of wireless one-to-one messaging, using Morse code and later speech, developed into a wireless one-to-many entertainment medium.

In the UK in the 1940s, when sound broadcasting was the only electronic mass medium, many assumed that new technologies would have the effect of displacing radio as a mass audience medium, an assumption that has continued to the present day. But, despite the advent of television and now the internet, radio remains popular; as each advance is made, radio audiences have by-and-large remained tuned to broadcast radio. However, the listening habits of the 16-24s are showing signs of change.

Figure 3.2 A radio timeline



One of radio's strengths is that much of it, even to this day, is live, so the medium remains capable of easily updating listeners with key elements of information such as news. Speech content remains important; BBC Radio 4 has a 12% share of all radio listening and delivers a mixed speech service which includes in-depth news and current affairs programming. But radio also has value as an entertainment medium, which includes the provision of music.

Another strength of radio is its portability and accessibility, allowing listeners to listen on a range of devices in different locations, and to accompany them on most journeys. Twenty-two per cent of all radio listening is done in a motor vehicle. The link between cars and radio listening is strong; a RadioPlayer study conducted by Proteus Research in November 2015 identified that eight in ten car buyers would not consider buying a car without a radio.

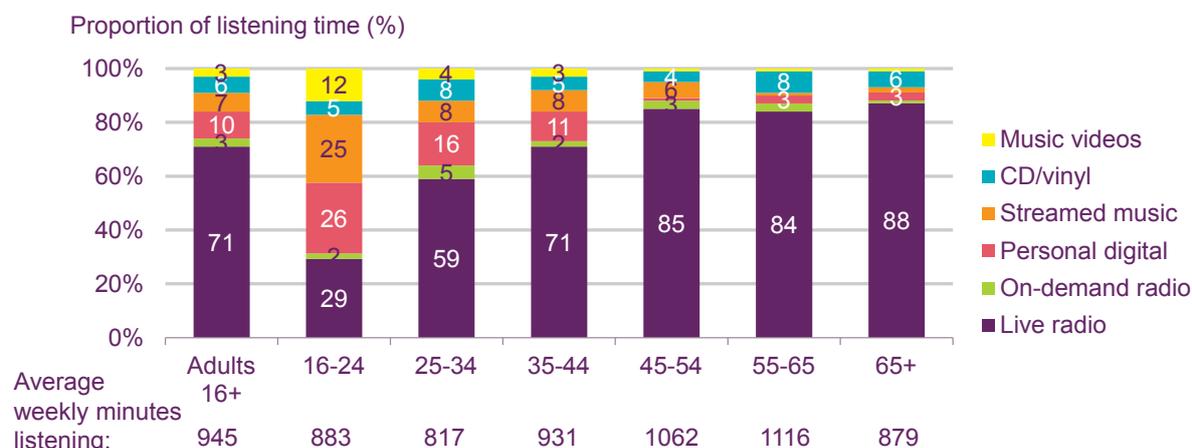
Many listeners treat radio as a dependable companion in a way often not seen on the same scale for other media. Ofcom’s qualitative research found that a key benefit of radio was companionship, providing relationships with the presenters and personalities, and radio can also be used as a background while listeners focus on other tasks.<sup>48</sup>

### Audio consumption of live radio, personal digital audio and streamed music differs by age, with 16-24s spending the least amount of time with radio

Today’s world of audio incorporates live and on-demand radio, personal digital audio and streamed music, together with listening to spoken word content and music on physical formats and videos. Ofcom’s Digital Day research is a study of over 1,500 consumers’ behaviour as they spend time watching, listening, communicating, playing and browsing content over a given period. This research allows us to see how consumers’ listening time is shared between different audio activities.

Total live radio accounts for 71% of all audio activities. Streaming, the current audio growth area, accounts for 7% of time spent listening. But the picture is very different for the 16-24s. This age group in particular spent almost equal amounts of time listening to live radio (29%), personal digital audio (26%), and streamed music (25%). According to RAJAR audience figures, since 2006 the numbers of 16-24s reached by radio has fallen by 4.9%, while the total time spent listening to live radio for this age group is 70% of what it was ten years ago. As seen below, the greatest proportion of radio listening is among those aged over 35, and this is likely to affect the overall resilience of radio, as younger people’s audio habits change.

**Figure 3.3 Proportion of time spent listening, by age group**



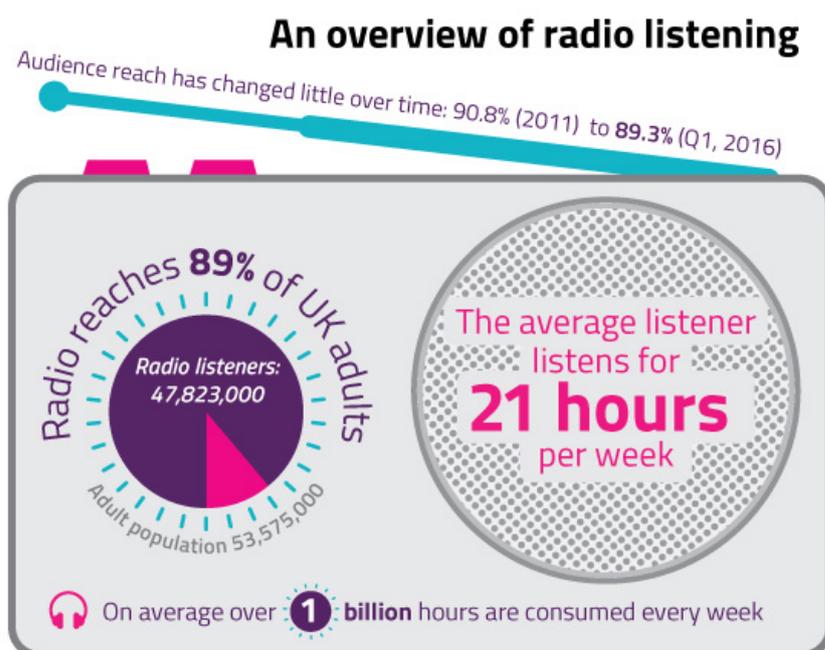
Source: Ofcom Digital Day 2016, Data book 1: C2. Adult diary:

Chart shows the proportion of all listening time (B2) attributed to each activity (D) by age group. The average weekly minutes figure is among those who did any listening activity across their diary week and also includes simultaneous activity.

Base: Adults aged 16+ (1512) 16-24s (129) 25-34s (189) 34-44s (282) 45-54s (299) 55-64s (259) 65+s (354).

<sup>48</sup> [http://stakeholders.ofcom.org.uk/binaries/research/radio-research/radio\\_deregulation/Local\\_Commercial\\_Radio\\_Content\\_Research.pdf](http://stakeholders.ofcom.org.uk/binaries/research/radio-research/radio_deregulation/Local_Commercial_Radio_Content_Research.pdf)

**Figure 3.4 Radio accounts for a large slice of people’s time**

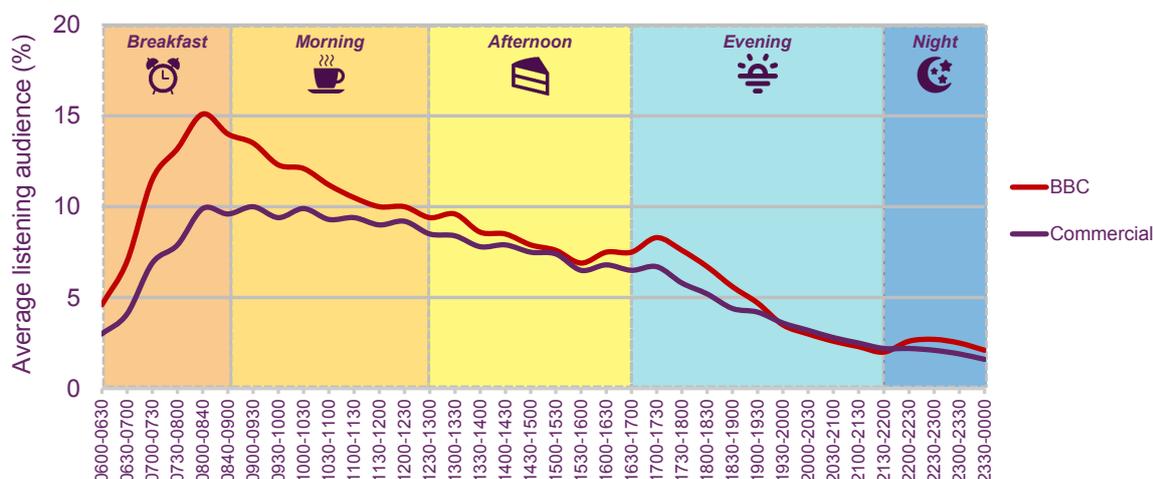


#### Radio peaks in the early morning

According to RAJAR, listeners spend an average of 21 hours per week listening to radio, but the level of consumption varies by the time of day - most people listen in the morning. Radio’s peak period of listening is at the start of the day, in contrast to television viewing, which peaks in the evening, as our Digital Day research in section 1.4 shows.

As Figure 3.5 below shows, the radio audience peaks in the morning between 7am and 9.30am, and steadily tails off throughout the day before climbing again around drive-time (4pm to 6.00pm). BBC radio services, which include BBC Radio 4 and BBC Radio 5 Live, and the BBC local radio services, all of which are speech-led during the breakfast period, as well as the BBC’s most popular network, BBC Radio 2, appeal more to listeners in the morning than commercial radio offerings as a whole. With a few exceptions, e.g. LBC, commercial radio is more reliant on music than on substantive speech content at this time.

**Figure 3.5 BBC and commercial radio listening, by day part**



Source: RAJAR, all adults (15+), 12 months to Q1 2016, Monday-Sunday, average audience.  
Base: National Total Survey Area.

## Live radio listening leads over other media during its early morning peak

Digital Day research shows a pattern of listening over a 24-hour period and, as the analysis in Figure 1.15 in section 1.4.5 shows, radio listening steals an early lead, reaching more of the available audience between 7am and 8am than any other medium. Not until 9am does radio lose this position to television.

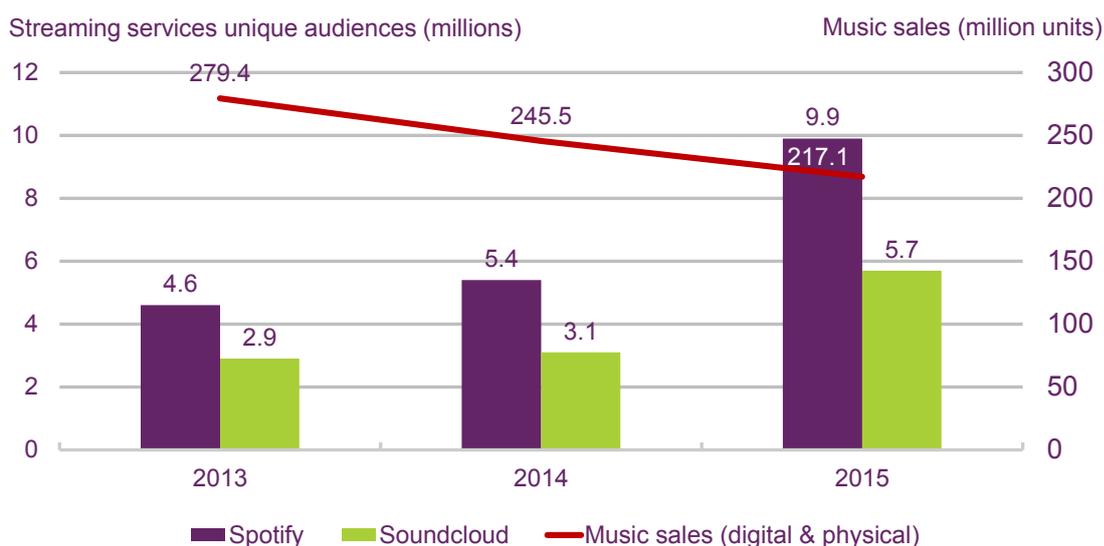
## A decline in music sales is balanced by an increase in music streaming

The take-up of new devices and the use of new audio media have changed the way in which people listen to audio, particularly music. Physical formats and digital downloads are being swapped for music from streaming sites like Spotify and Soundcloud, but the impact on live radio does not appear to be as great.

The reach of radio is close to 90% of the adult population. Between the years 2013 and 2015 (the time frame of the chart below) reach slipped back by just 0.8pp while total hours, a measure of all radio listening, reduced by just 0.5%.

As Figure 3.3 shows, 16% of listening time is spent with purchased physical or digital music, driven by sales of 217 million units (comprising albums and singles). Streaming services, including the two largest, Spotify with 9.9 million users and Soundcloud with 5.7 million users, contribute 7% of total listening time. Despite the increase in the audiences of these streaming sites, and the decline in music sales, the proportion of listening time to these sources of audio is relatively unchanged since 2014, when Ofcom's previous Digital Day research was done. This would suggest that the relationship between music sales and music streaming is a competitive one, with consumers choosing one or the other, and that the small impact on radio listening figures during this period shows the resilience of live radio.

**Figure 3.6 The shift of audio consumption from albums and singles to streaming**



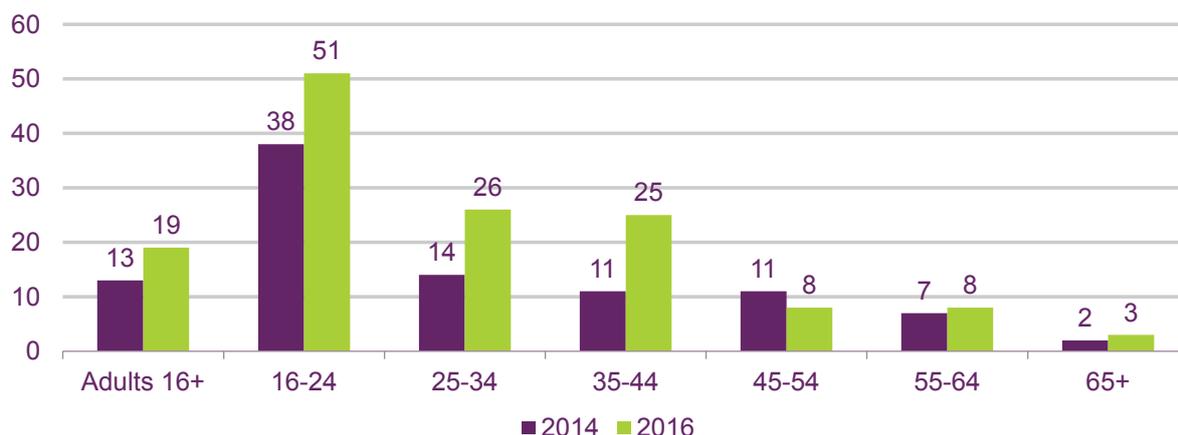
Source: Entertainment Retailers' Association / Official Charts 2016; comScore MMX Multiplatform UK, total digital population 15+, May 2016.

Note: Spotify and Soundcloud only. The unique audiences from these two sites account for the largest take-up of the streamed music unique audience. 2013 data are based on May to December 2013, averaged.

The amount of streaming, although small in comparison with radio listening (7% vs. 71% share of audio listening), continues to grow, particularly among the under-44s. The proportion of people who use streaming services is also increasing. The reach of streamed

music was highest among the 16-24s, as shown in our Digital Day research (51%); this was double that of the next two age demographics, 25-34s (26%) and 35-44s (25%).

**Figure 3.7 Weekly reach of streamed music, by age group: 2016 vs. 2014**

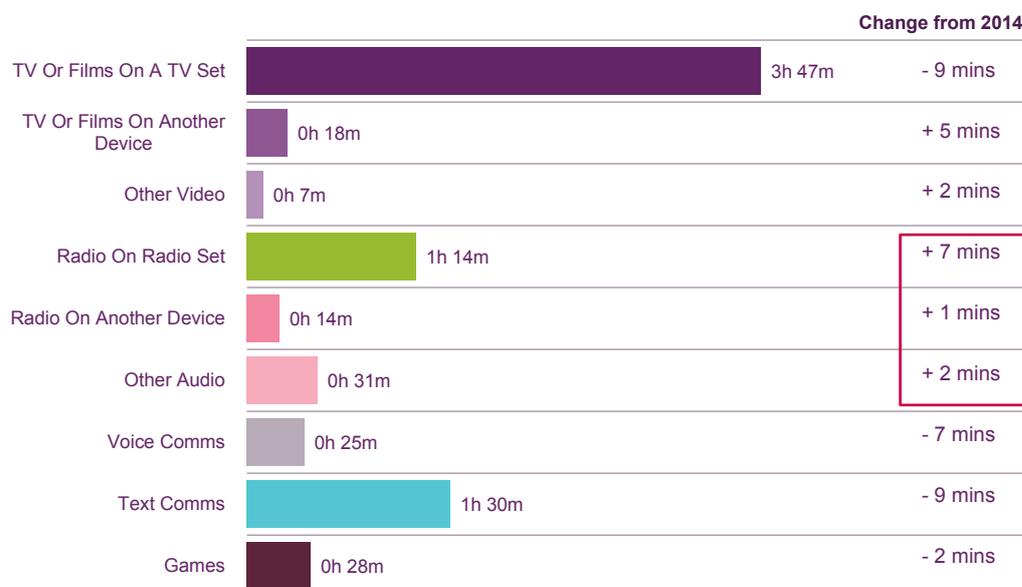


Source: Ofcom Digital Day 2016, Data book 1: A1. Adult diary:  
 Chart shows the proportion of adults who recorded activity (D) at any point across their diary week.  
 Base: 2016: Adults aged 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354); 2014: Adults aged 16+ (1644), 16-24 (101), 25-34 (225), 35-44 (348), 45-54 (400), 55-64 (311), 65+ (259)

### Listening to radio on a radio set has increased by seven minutes per day

Considering the changes between 2014 and 2016 in time spent consuming audio in a day, all audio activities across the board increased, while time spent with television viewing, voice and text communications all fell. Between 2014 and 2016 average listening on a radio set grew by seven minutes per day, listening to other audio grew by two minutes, and listening to radio on another device (e.g. smartphone) by one minute per day.

**Figure 3.8 Average time spent on grouped activities per day: UK adults 16+**



Source: Ofcom Digital Day 2016, Data book 1: B4(2). Adult diary:  
 Data are taken from a combination of activities (D) and devices (E) recorded. The calculations are made by netting all grouped activities together and averaging the time spent. Zeros are included so as to reflect the whole UK population. Base: Adults aged 16+ in UK (1512)



## 3.2 The radio industry

### 3.2.1 Introduction

In this section we examine the characteristics of the UK radio industry, focusing on commercial and community radio station revenue and BBC expenditure, together with the audience shares of the main players.

### 3.2.2 Radio revenue and expenditure

#### Radio industry revenue and spend

Commercial radio is funded purely from radio advertising and sponsorship, unlike BBC radio which is funded from the licence fee. Commercial radio revenue per listener is £14.33, up from £14.14 in 2014. Taken as an average, £29.08 of the annual £145.50 licence fee is allocated to BBC Radio. Total BBC expenditure on radio has been cut by £8.0m over the period 2013/14 and 2015/16.

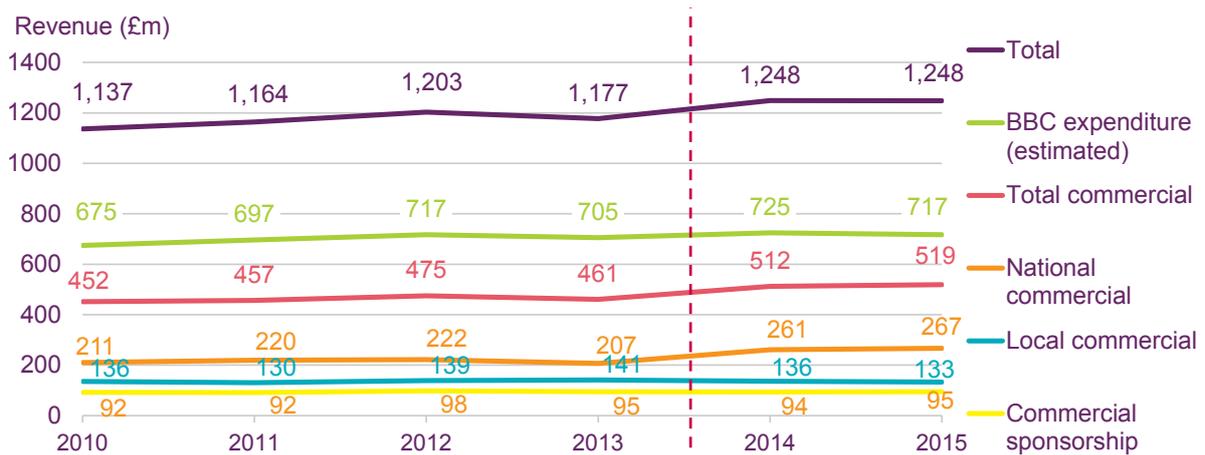
UK advertising overall continues to grow, led mainly by internet advertising spend. Based on Advertising Association/ Warc reported figures for 2015, although radio advertising has grown by £16.9m (3%) year on year to £592.3m, this rate of increase falls short of that achieved by other advertising markets in the UK such as television. In 2015, radio advertising represented 3.0% of all advertising (3.2% in 2014).

#### Commercial advertising revenue up by 1.4%, or £7m

Commercial revenues reported to Ofcom by operators grew by £7.0m in 2015, an increase of 1.4% year on year. This growth was driven by national advertising revenue, up by £6.0m (2.3%) to £267m in 2015. Local advertising revenue was down by £3.0m (2.2%) in 2015. For commercial stations whose national and local revenues is broadly equal, the gains made by national advertising were sufficient to offset this loss. Broadcasters which sell advertising across a range of stations/brands receive a greater proportion of revenue from national advertising, but smaller stations tend to rely more on local advertising.

Revenue from commercial sponsorship grew by £1.0m (1.1%) in 2015, to £95.0m. This recovered the £1.0m loss in revenues incurred in 2014. National commercial advertising remains the largest single source of income for UK commercial radio.

**Figure 3.9 Radio industry revenue: 2010-2015**



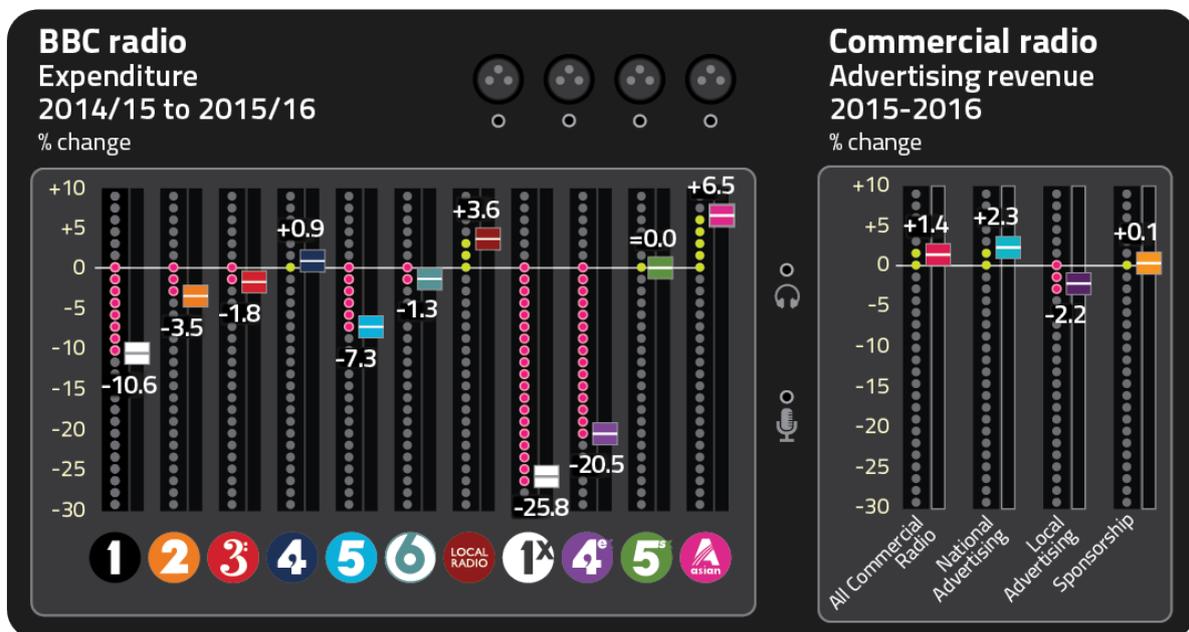
Source: Ofcom / operator data / BBC Annual Report 2009-2016. Note: BBC expenditure figures are estimated by Ofcom based on figures from the BBC Annual Report ([www.bbc.co.uk/annualreport](http://www.bbc.co.uk/annualreport)); figures in the chart are rounded and are nominal. Total includes community radio, but community radio is not shown on the chart. Total commercial includes all sources of revenue - national, local, sponsorship and 'other', but 'other' is not shown on the chart.

**BBC cuts £8m from radio content expenditure**

BBC Radio 1, 1Xtra and 4 Extra had the largest expenditure cuts in percentage terms (-10.6%, -25.8% and -20.5% respectively, 2014/15 to 2015/16). Other services had annual cuts in the range of -1.3% to -7.3%. The exceptions were Radio 5 live Sports Extra, which had no cuts at all, while two stations had increased expenditure: BBC Asian Network, up by 6.5% and Radio 4, up by 0.9%. Overall, the 40 BBC local radio services had an annual increase of 3.6%.

In monetary terms, the 25.8% cut for 1Xtra equated to £1.6m, as did the 3.5% cut for Radio 2. Local radio received an extra £4.2m.

**Figure 3.10 Radio expenditure and revenue percentage change, year on year**



Source: Ofcom / operator data

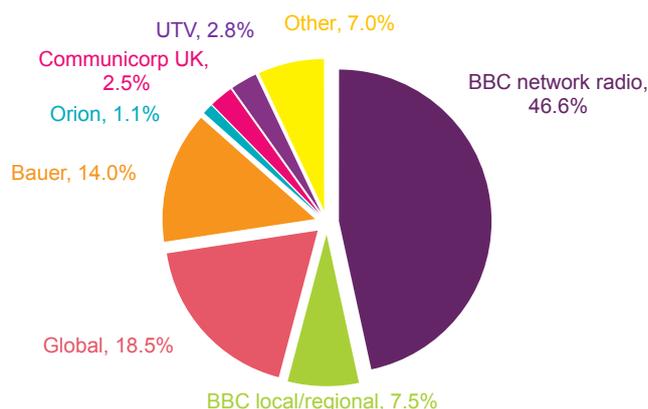
### 3.2.3 Radio consumption

#### Radio sector market shares in 2016

The BBC's share of all radio listening, including national network radio and local/regional radio, was 54.1% in Q1 2016, down by 0.3pp since Q1 2015. The majority of the national commercial radio services are operated by the commercial radio groups shown in Figure 3.11 below. The commercial radio groups' market share includes listening both to their local and to their national stations (as appropriate). Over the past year, comparing like with like, Global Radio has increased its market share by 0.9pp, to 18.5% of all radio listening in the UK.

In the year to May 2016, Bauer Media acquired the Orion group of stations, based in the West Midlands. The addition of eight radio stations in this major market delivers growth potential for Bauer.

**Figure 3.11 Share of all radio listening hours: Q1 2016**



Source: RAJAR, all adults (15+), Q1 2016. Base: National Total Survey Area.

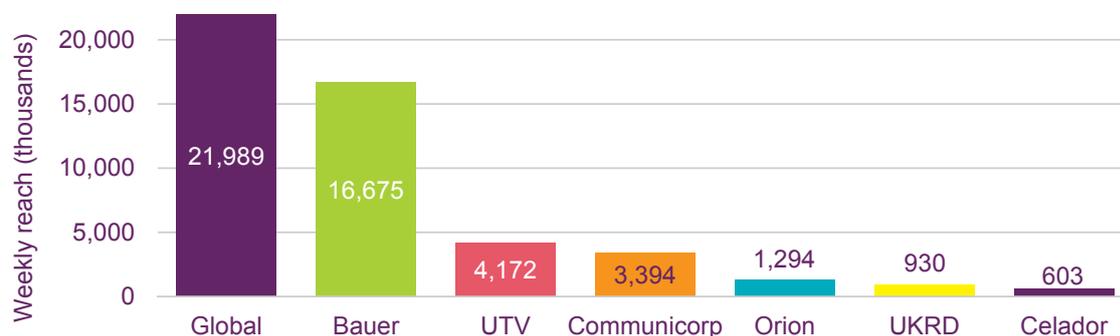
Note: UTV Radio started trading as Wireless Group in March 2016 and Orion Media Group was acquired by Bauer in May 2016.

#### The two largest commercial radio groups together reach over 39 million listeners every week

Five of the seven leading commercial radio groups increased the number of listeners they reached, with the two largest groups, Global and Bauer, gaining 1.4 million more listeners between them, reaching a total of 38.7 million listeners.

**Figure 3.12 Commercial radio, by weekly audience reach: Q1 2015**

|                          |        |        |        |        |        |      |        |
|--------------------------|--------|--------|--------|--------|--------|------|--------|
| Weekly UK audience reach | 41.0%  | 31.1%  | 7.8%   | 6.3%   | 2.4%   | 1.7% | 1.1%   |
| Annual change in reach*  | +1.9pp | +1.0pp | -0.6pp | +0.3pp | +0.2pp | +0.1 | -0.2pp |



Source: RAJAR, all adults (15+), Q1 2016. Base: National Total Survey Area \* Q1 '15 and Q1 '16  
 Note: UTV Radio started trading as Wireless Group in March 2016 and Orion Media Group was acquired by Bauer in May 2016.

### 3.2.4 The radio market

Non-BBC radio services in the UK are licensed by Ofcom. Analogue (i.e. FM and AM) licences include conditions relating to the type of service that must be provided and the geographical area that must be covered.

In the case of DAB (digital audio broadcasting), as a number of radio audio signals are multiplexed together in the transmission process in any particular licensed area, Ofcom awards licences to multiplex operators to deliver a bouquet of radio services<sup>49</sup>. There are 54 local multiplexes and two commercial multiplex networks which cover large parts of the UK, in addition to a BBC national multiplex transmission network.

**Figure 3.13 Digital audio broadcasting UK radio services: May 2016**

|             | UK Commercial 90% coverage | UK Commercial 75% coverage | BBC UK-wide | Local Commercial | Total |
|-------------|----------------------------|----------------------------|-------------|------------------|-------|
| Multiplexes | 1                          | 1                          | 1           | 54               | 57    |
| Services    | 12                         | 18                         | 11          | 396*             | 437*  |

\* Includes simulcast services (205 unique services). Excludes BBC local radio services

Source: Ofcom, May 2016

In total, 286 analogue local commercial radio licences are in issue; over 80% are for FM radio broadcasting. Ofcom is nearing the end of its third round of awarding and issuing community radio licences. In each licensing round since 2005 Ofcom has sought applicants on a region-by-region basis. There are currently 239 licenced community radio stations broadcasting.

<sup>49</sup> The individual services on DAB multiplexes are also required to hold a licence.

**Figure 3.14 Analogue UK radio stations broadcasting: May 2016**

| Type of station        | AM        | FM         | AM/FM total |
|------------------------|-----------|------------|-------------|
| Local commercial       | 51        | 235        | 286         |
| UK-wide commercial     | 2         | 1          | 3           |
| BBC UK-wide networks   | 1         | 4          | 5           |
| BBC local and nations* | 35        | 43         | 43          |
| Community radio        | 6         | 233        | 239         |
| <b>TOTAL</b>           | <b>95</b> | <b>516</b> | <b>576</b>  |

Source: Ofcom, May 2016

Note: licence conditions determine the amount of programming that may be shared between licensed services. Here we have listed the number of services providing at least four hours a day of separate programming.

\* Includes simulcasts

### 3.2.5 Community radio

#### Community radio revenue has increased slightly

At £11.6m, there was a small (0.5%) increase in the past year in total revenue for the community radio sector. However, an increase in the number of licensed radio services operating has had the effect of lowering the average income per station to £53,500 (down by 4.2%). The median, or mid-point, income level for 216 stations fell by a greater amount (8.5%) year on year, to £32,500.

**Figure 3.15 Average income for community radio stations: 2010-2015**

| Income                | 2010                | 2011               | 2012                | 2013               | 2014             | 2015               |
|-----------------------|---------------------|--------------------|---------------------|--------------------|------------------|--------------------|
| Average (mean) income | £65,750<br>(-12.9%) | £60,250<br>(-8.3%) | £57,000<br>(-5.4%)  | £55,500<br>(-2.7%) | £55,750<br>+0.8% | £53,500<br>(-4.2%) |
| Median income         | £42,500<br>(-7.14%) | £40,500<br>(-4.8%) | £35,250<br>(-13.1%) | £33,250<br>(-5.6%) | £35,750<br>+6.9% | £32,500<br>(-8.5%) |

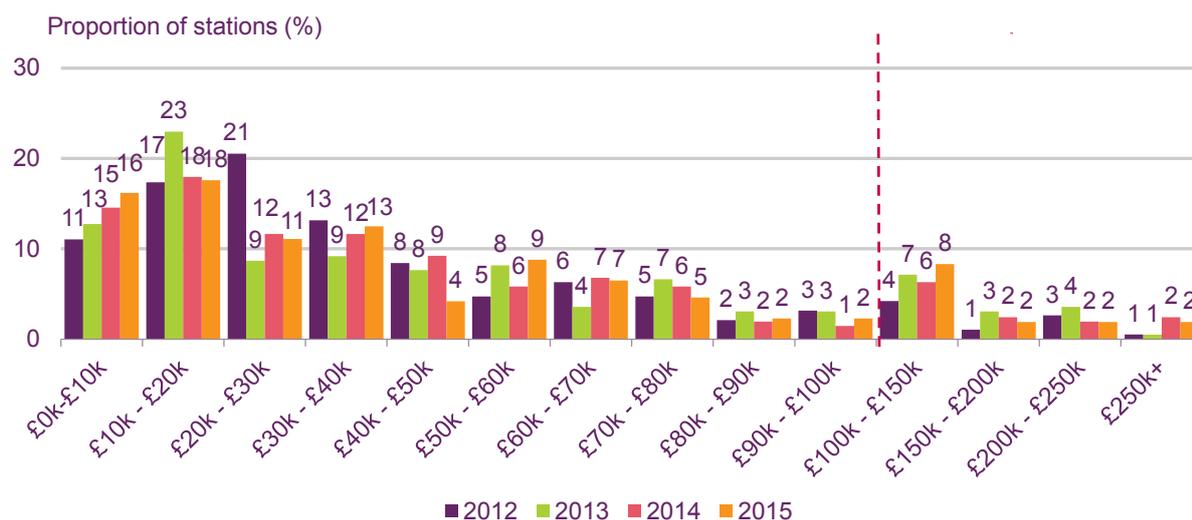
Source: Ofcom analysis of community broadcasters' returns.

Note: The data collection period changed from the financial year to the calendar year as of 2011. Data from previous years have been adjusted to reflect this.

#### Most community radio stations run on income levels lower than £50,000

As in previous years, most community radio stations' income was less than £50,000 in 2015; this was the case for 62% of all stations in 2015, compared with 66% in 2014. Around a quarter of stations reported total income of between £50,000 and £100,000, with the remaining 14% earning above £100,000 in 2015 - a rise of 2% on the previous year.

**Figure 3.16 Distribution of total income levels across the community radio sector**

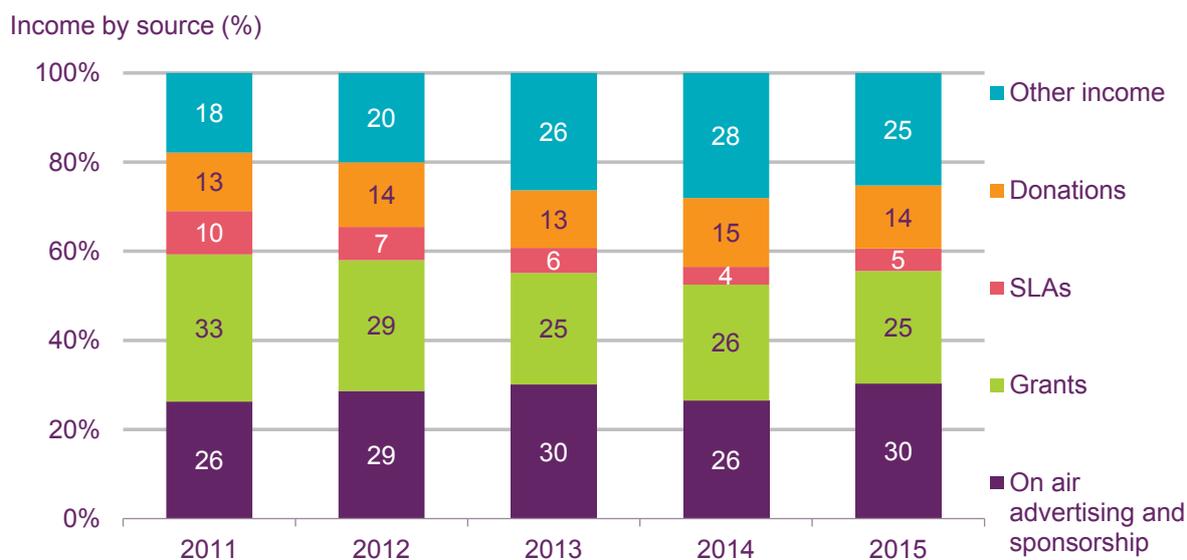


Source: Ofcom analysis of community broadcasters' returns. Figures rounded.

**Half of community radio's income is from grants and sources other than on-air advertising**

The largest single source of income for a community radio station (30%) in 2015 was on-air advertising and sponsorship, bringing the sector back into line with its 2013 reported share. Grant funding and income from donations appears broadly flat, with both down by 1pp over the year. 'Other' income, which includes revenue from the provision of training, fundraising and events, and merchandising income, reduced over the year from 28% to 25% of total income.

**Figure 3.17 Community radio income, by source**



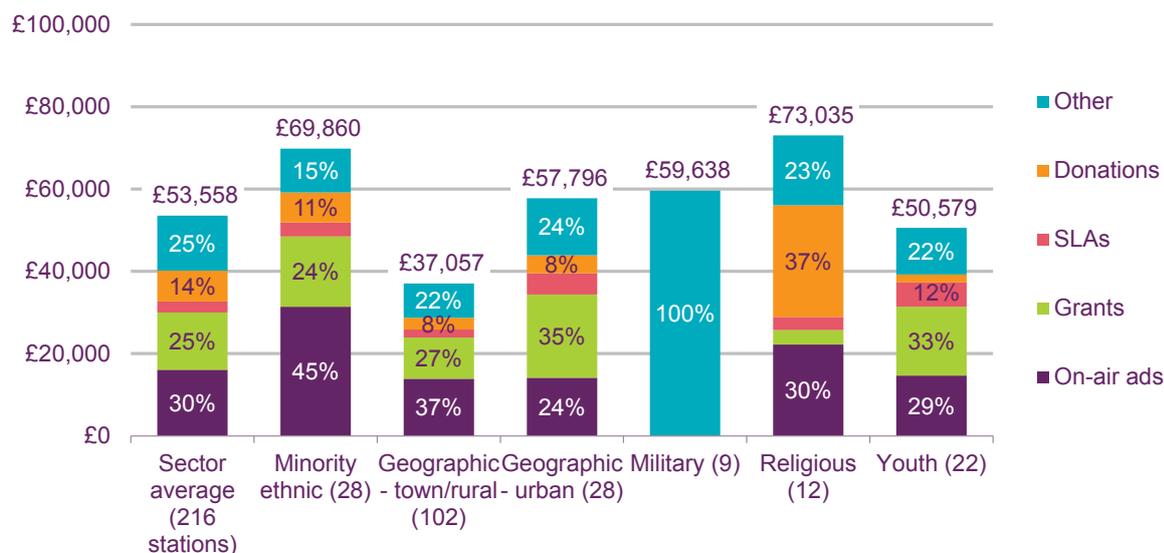
Source: Ofcom analysis of community broadcasters' returns

**Religious stations rely most on grants for income**

Religious and minority ethnic community radio services attracted the highest levels of income, with donations representing the largest single income source for religious stations (37%) and on-air advertising (45%) being the largest income category for minority ethnic

stations. Smaller geographic town/rural area services received the smallest level of income per station, an average of £37,057 per station, down by £1,000 from 2014's £38,000 figure.

**Figure 3.18 Average income, by type of community served**



Source: Ofcom analysis of community broadcasters' returns

### Community radio expenditure by station is up

In 2015, average expenditure per community radio service was £54,800, an increase of 2.3%. The median spend remained flat between 2014 and 2015, following growth in income for community radio reported in 2013-2014. We see that the average expenditure per station is greater than average income per station, a difference of £1,300. Expenditure totals do not always correlate directly with broadcast operating costs, as some community radio services receive revenue to provide aspects of social gain, such as providing training.

**Figure 3.19 Average expenditure of community radio stations: 2010-2015**

| Expenditure                | 2010                | 2011               | 2012                | 2013               | 2014               | 2015            |
|----------------------------|---------------------|--------------------|---------------------|--------------------|--------------------|-----------------|
| Average (mean) expenditure | £67,000<br>(-12.3%) | £64,250<br>(-4.1%) | £58,000<br>(-9.7%)  | £55,000<br>(-5.0%) | £53,500<br>(-2.7%) | £54,800<br>2.3% |
| Median expenditure         | £43,000<br>(-17.5%) | £41,000<br>(-4.9%) | £35,500<br>(-15.4%) | £35,750<br>(2.7%)  | £33,250<br>(-6.8%) | £33,250<br>0%   |

Source: Ofcom analysis of community broadcasters' returns.

Note: The data collection period changed from the financial year to the calendar year as of 2011. Data from previous years have been adjusted to reflect this.

### Types of expenditure by community radio have changed little over time

Taken as a whole, the areas in which a typical community radio station might spend its income have changed little over time. Staff costs remain the largest area of expenditure, reaching 50% in 2015. There was a slight decline in technical and admin/marketing costs over the year, but this was matched by a slight increase in premises costs.

**Figure 3.20 Community radio station expenditure, by type**

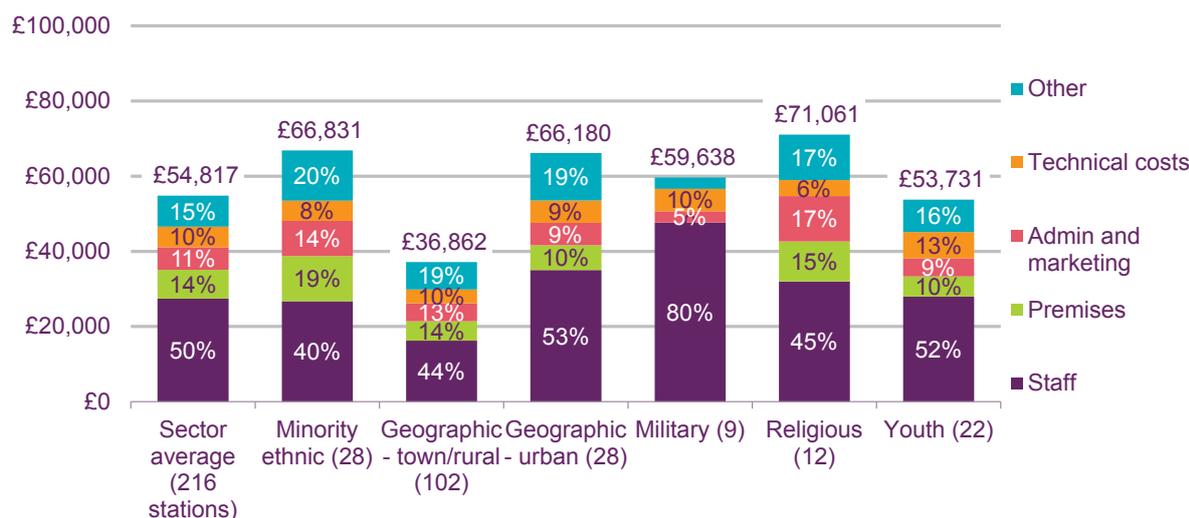


Source: Ofcom analysis of community broadcasters' returns

**Spend by religious community radio stations is up by 14%**

When considering total expenditure by type of community served, the largest year-on-year increases are among religious (14.1%), military (13.1%) and youth-oriented (12.5%) community radio stations. The cost of staffing these stations, as a proportion of total expenditure, ranges from 44% for geographical town-rural services to 80% for military services.

**Figure 3.21 Average expenditure, by type of community served**



Source: Ofcom analysis of community broadcasters' returns

**The number of volunteers working in community radio has fallen over the year**

In a full 168-hour week, community radio, on average, broadcasts original (live and pre-recorded output) programming for 54% of this time. Each community station is required to deliver on its 'key commitments' which ensures a focus on community benefits, such as training, and community access – most stations are largely run by volunteers. In 2014 a typical community radio station enlisted support from 87 volunteers, and trained 60 volunteers.

**Figure 3.22 Community radio hours and volunteers: 2015**

|                                | <b>Sector average</b> |
|--------------------------------|-----------------------|
| Total original hours per week  | 90                    |
| Number of volunteers           | 79                    |
| Total volunteer hours per week | 186                   |
| Number of volunteers trained   | 51                    |

*Source: Ofcom analysis of community broadcasters' returns*



## 3.3 Radio and the audio listener

### 3.3.1 Introduction

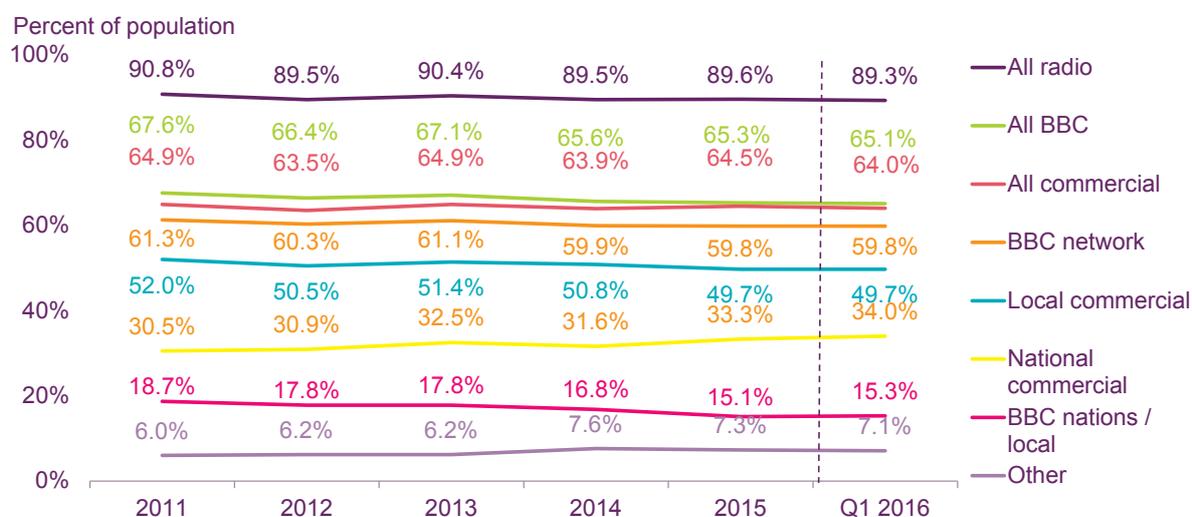
The following section examines how patterns of radio and audio listening have changed in the UK, both in the past year and over the longer term. It uses audience data to analyse listening by sector and by age group, as well as drawing on consumer research.

### 3.3.2 Weekly radio listening in the UK

#### Radio reach remains high

Apart from variance by sector, such as the growth in national commercial radio or the slight decline in local BBC and commercial radio listening, the overall picture of radio listening changed little between 2011 and 2015, fluctuating around the 90% level (a 1.2pp difference over five years). Over this period, national commercial radio, helped by the increased number of stations broadcasting on the DAB platform, has increased its reach from 30.5% to 34.0%.

**Figure 3.23 Reach of radio, by sector**

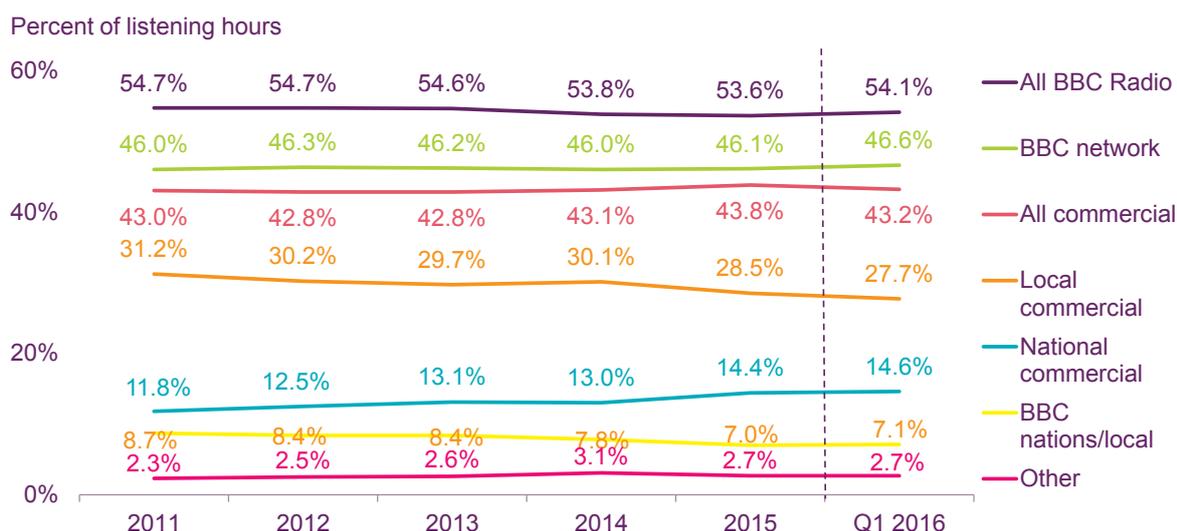


Source: RAJAR, All adults (15+), calendar years 2011-2015, Q1 2016

#### National radio services continue to gain in popularity

The shares shown in Figure 3.24 are calculated from the total listening time of all the services in each sector. Although local commercial radio has lost share over five years (by 2.7pp), as noted above, national commercial radio services combined were up by 2.6pp over the same period. BBC national network services remained broadly level, while the BBC local and nations' radio services lost a 1.7pp share of UK radio listening between 2011 and 2015.

**Figure 3.24 Share of listening hours, by sector**



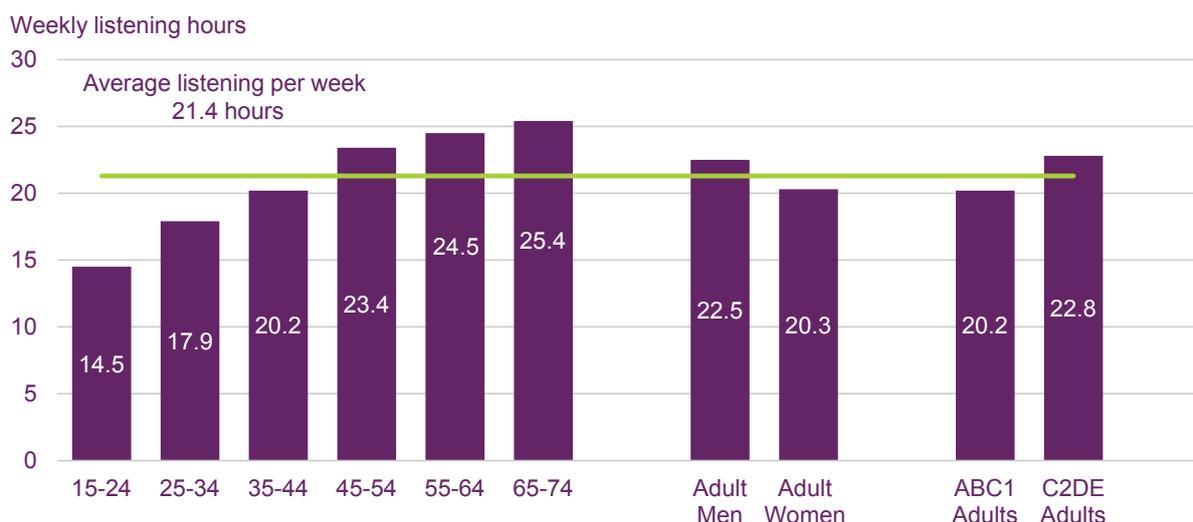
Source: RAJAR, All adults (15+), calendar years 2011-2015, Q1 2016

**Younger people listen to radio for far less time than all adults**

Average listening to radio over a week stands at 21.4 hours. Listening varies by age, gender and socio-economic group, but changes little year on year. In most cases there has been no change, or a change of less than half of one percentage point, over the past 12 months. This suggests that radio’s appeal is stable across all demographic groups.

As Figure 3.25 shows, younger age groups listen to radio for less time each week than the average for all adults, and the time spent listening to radio increases with age.

**Figure 3.25 Average weekly listening, by demographic: year ending Q1 2016**



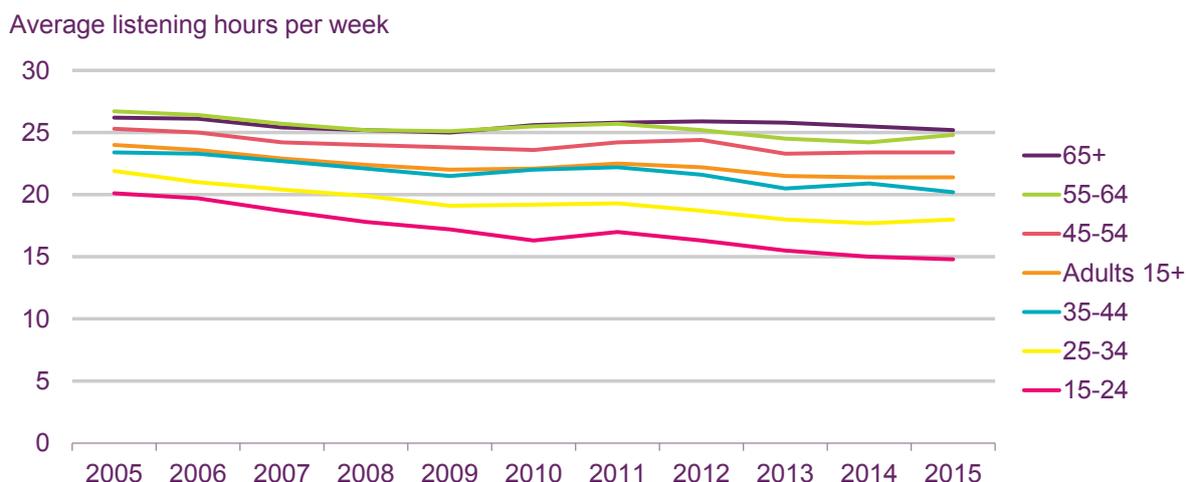
Source: RAJAR, all adults (15+), year ending Q1 2016, average weekly listening hours per listener

**15-24s listened to radio for five hours less in an average week in 2015 than in 2005**

Although the amount of time that people spend listening to the radio each week has remained broadly stable across all age ranges in recent years, the longer-term trend shows that there has been some decline in the average amount of time that people spend listening. This fall is more pronounced for the 15-24s. Comparing 2015 to 2005, this group spent five

hours less per week listening to the radio. For the older age groups, time spent listening to the radio has also fallen over this period, although to a far lesser extent.

**Figure 3.26 Average weekly listening, by age, 2005-2015**



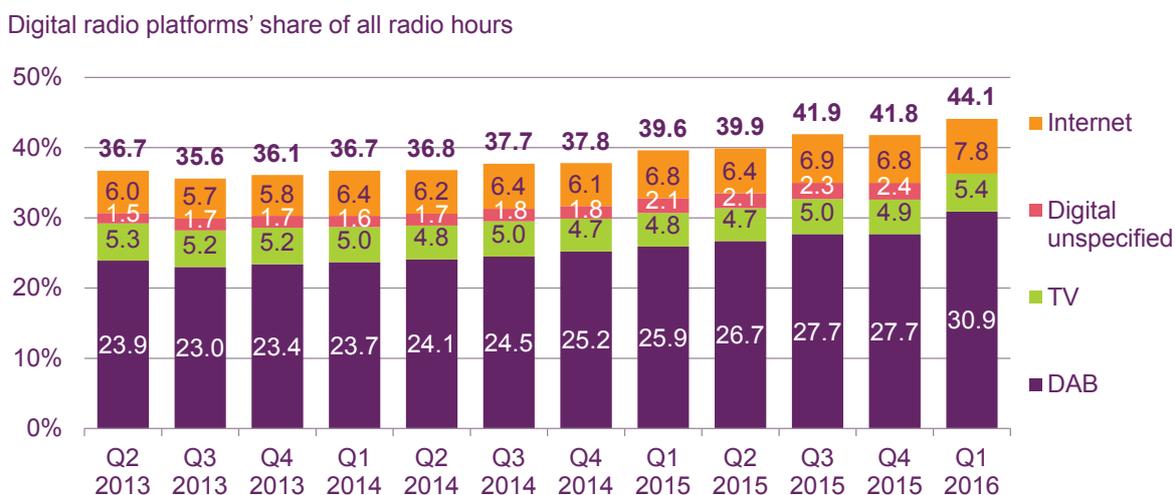
Source: RAJAR, all adults (15+), Q4 of each year, 12 month weighted, all radio TSA

### 3.3.3 Digital radio listening trends

#### Two-fifths of radio listening is through a digital device

Many BBC and commercial radio services broadcast using digital technology, particularly through digital audio broadcasting transmissions (DAB), digital television and online; listening in this way now accounts for a 44.1% share of listening (Q1, 2016). The largest volume of listening is to DAB services (30.9%), which is up 5pp year on year. Over the past quarter, the share of listening via the internet has grown by 1.0pp.

**Figure 3.27 Digital radio's share of radio listening: Q1 2016**



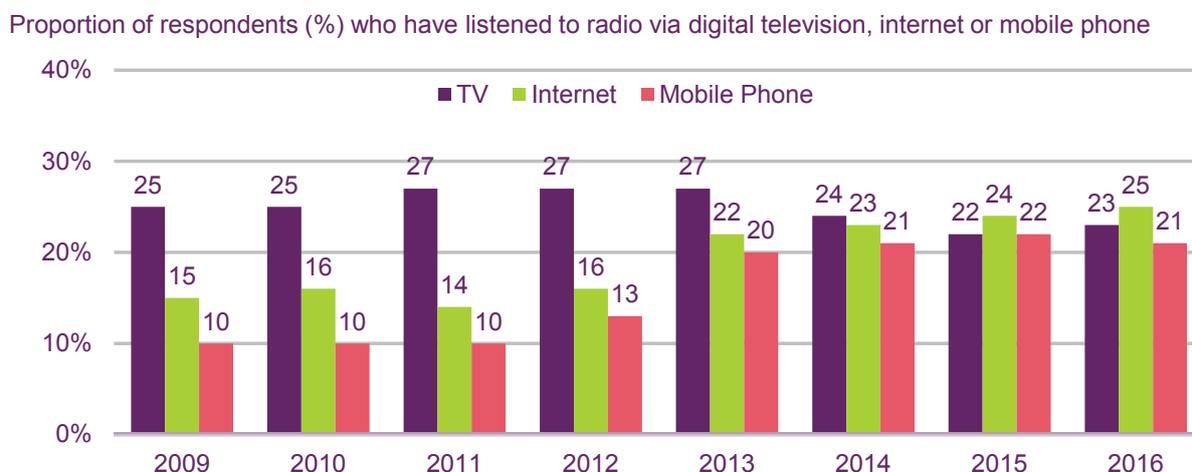
Source: RAJAR Quarterly wave of radio listening.

Note: 'Digital unspecified' relates to listening to digital-only stations where the survey respondent has not specified the listening platform used. With effect from Q1 2016 this term has been eliminated. 'Internet' is classified as 'online/apps'.

## Radio listening – now a more evenly mixed ecology

Looking back over the last seven years, the proportion of listeners listening to radio via TV, the internet and by mobile phone has balanced out to a level within the range 21% to 25%. Listening to radio via the internet continues to increase in popularity, reaching 25% in 2016.

**Figure 3.28 Listening to radio via TV, internet and mobile phone**



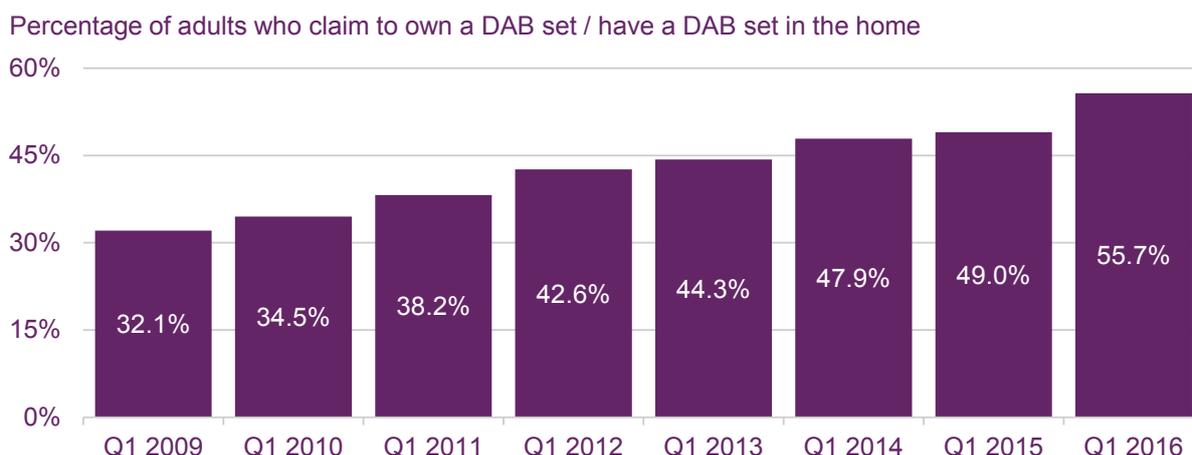
Source: Ofcom Technology Tracker. Data from Q1 of each year 2012-2014, then H1 2015-2016. Base: All adults aged 16+ (n = 6090 UK 2009, 9013 UK 2010, 3474 UK 2011, 3772 UK 2012, 3750 UK 2013, 3740 UK 2014, 3756 UK 2015, 3737 UK 2016) QP11 D/E/C: How often, if at all, do you access the radio via – Digital radio via: TV, Internet, mobile phone? \*NB 2013-16 measures for internet combine responses across radio listeners and internet users, 2013-16 measures for mobile phone combine responses across radio listeners and mobile phone users.

## Upturn in DAB receiver ownership

After a period of slow growth between Q1 2014 and Q1 2015, DAB set take-up has increased by 6.7pp in the current year to Q1 2016. Ownership of a DAB set, as claimed by respondents, now stands at 55.7% of all adults.

In Q1 2016, over 82% of new cars sold and 40% of new commercial vehicles sold were fitted with a DAB receiver as standard.

**Figure 3.29 Ownership of DAB sets: Q1 2016**

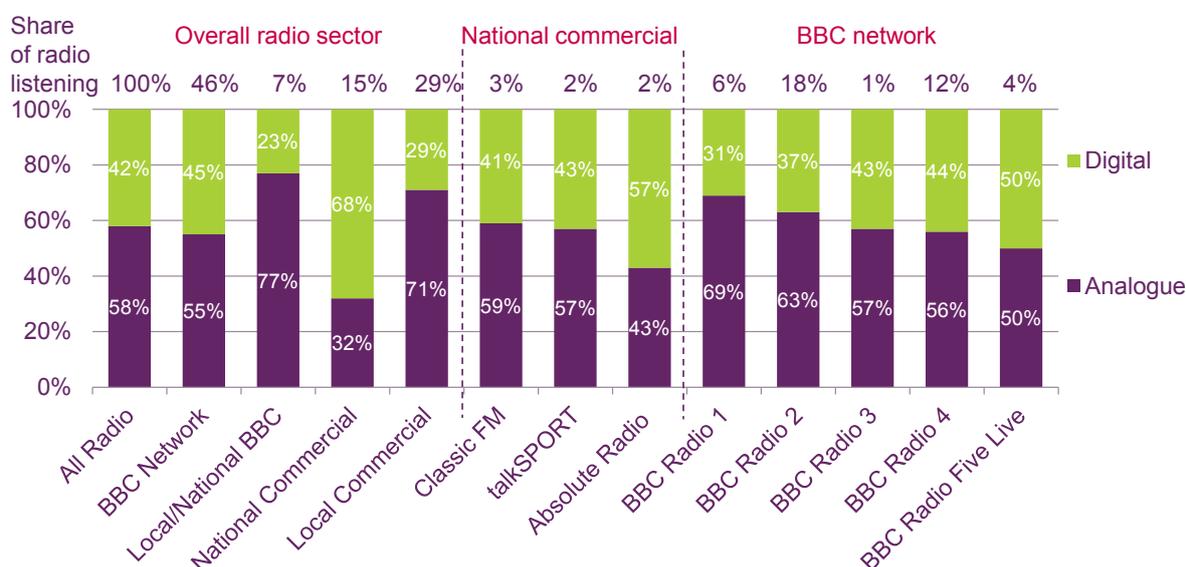


Source: RAJAR / Ipsos MORI / RSMB Q1 2009-2016

## Levels of digital radio listening vary by sector and by station

Radio listening by sector and station, and via analogue or digital receivers, varies markedly from the average 'all radio' category, which shows that in the year ending Q1 2016 digital radio had a 42% share of radio listening. National commercial radio, which represents a 15% share of all listening, has 68% of listening through a digital device whereas BBC network radio (46% share of all radio listening) achieves a much lower proportion (45%) of its listening through a digital device.

**Figure 3.30 Platform split by sector and station: year ending Q1 2016**



Source: RAJAR, year ending Q1 2016, adults 15+

Note: With effect from Q1 2016 the term 'not stated/specified' was been eliminated.

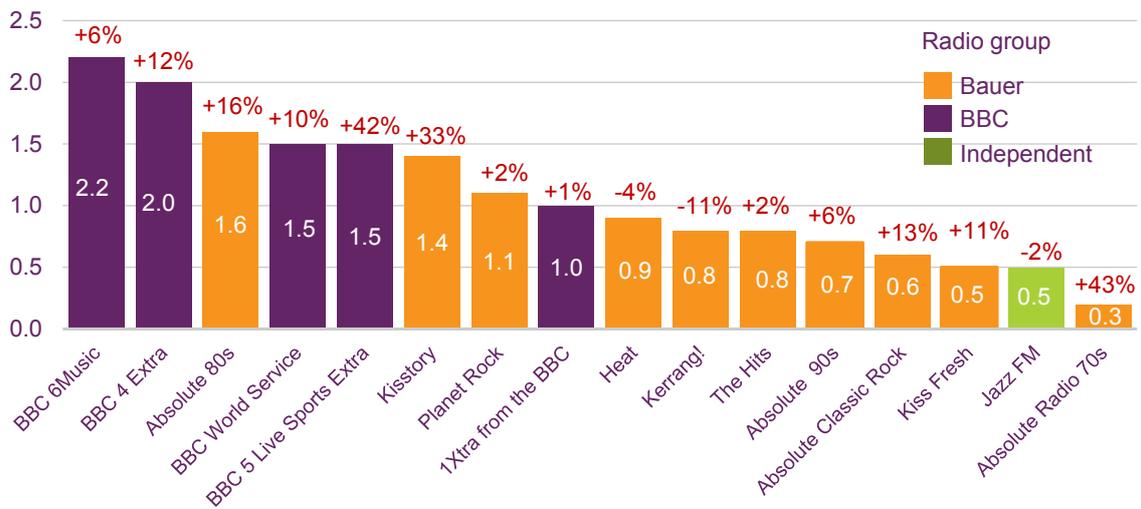
## Two broadcasters lead in digital-only radio service provision

As noted above, while many radio services are simulcast on analogue and DAB, some radio services broadcast only digitally. Among the digital-only radio services, BBC Radio and the commercial radio group Bauer Radio account for the largest share of digital-only listening. The BBC leads, with over 2.0 million listeners reached by both its BBC 6 Music and 4Extra radio stations, and these continue to increase their audience (by 6% and 12% year on year, respectively). Bauer operates more digital-only radio services than the BBC; seven of which reach audiences of less than one million, but the overall proportional split in Q1 2016 between the BBC's and Bauer's digital-only listening audience, is 51% Bauer / 49% BBC.

**Figure 3.31 Most popular UK digital-only stations: Q1 2016**

Average weekly reach year ending Q1 2016 (millions)

% change year on year



Source: RAJAR, year ending Q1 2016 adults 15+

# The Communications Market 2016

## 4 Telecoms and networks

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# 4.1 Key market developments in telecoms and networks

## 4.1.1 Sector overview

Total UK telecoms revenue grew in 2015, up by £0.2bn (0.5%) to £37.5bn (Figure 4.1). This was due to a £0.5bn (4.2%) increase in retail fixed revenue during the year, which resulted from a 12.6% rise in fixed internet revenues<sup>50</sup> (up by £0.6bn to £5.1bn) and was partially offset by falls in other categories of revenue of between 0.4% (for retail mobile revenues) and 4.2% (for wholesale services). Revenue from corporate data services also continued to fall in 2015, declining by 1.0%, to £2.6bn. Average monthly household spend on telecoms services increased by £2.52 (3.2%) to £82.17 in real terms in 2015. This represented 3.5% of total household spend, the same proportion as in 2014.

The total number of fixed voice lines decreased by 0.3 million (1.0%) to 33.2 million in 2015, while the total number of mobile subscriptions, including handset, dedicated mobile data and machine-to-machine (M2M) connections, increased by 1.6 million (1.8%) to 91.5 million during the year.

Fixed-to-mobile substitution in voice calls continued in 2015, when fixed voice call minutes fell by seven billion minutes (9.2%) to 74 billion minutes in 2015<sup>51</sup> and mobile voice call minutes increased by five billion minutes (2.0%) to 143 billion minutes. Falling mobile voice prices are likely to have contributed to these trends, as well as the increasing prevalence of mobile tariffs offering unlimited voice minutes, and the convenience of smartphones. In February 2015, Ofcom varied the licences of the UK's four mobile networks to commit the operators to providing 90% geographic coverage for voice calls by the end of 2017<sup>52</sup>.

The total number of outgoing SMS and MMS messages continued to fall in 2015, down by eight billion messages (7.6%) to 101 billion messages, although this was a smaller fall than in either 2013 or 2014. While traditional mobile messaging volumes have declined over recent years, the use of instant messaging services as a substitute (in particular OTT services such as Facebook Messenger and WhatsApp) has increased. Our Digital Day research indicates that there has been substantial growth since 2014 in the number of people using instant messaging services. See section 1.4 for more information.

A key development in telecoms over the past decade has been the launch smartphones, and the accompanying growth in the use of mobile data services. This, as well as advancements in the capabilities of mobile devices and the launch of 4G services, has led to data usage increasing significantly. In the UK, the growth of 4G has been rapid; in Q4 2015 4G accounted for almost half of all mobile subscriptions (46%), and 4G take-up increased across all ages, genders and socio-economic groups in 2016. The availability of 4G mobile services has also increased, with the UK having 97.8% outdoor premises coverage by at least one operator in May 2016. The number of M2M connections has also been growing (up 7% to 6.7 million in 2015), as Internet of Things (IoT) devices begin to enter the market.

As technologies develop and become embedded, new uses and consumer behaviours emerge. We expect that the introduction of a new generation of network and device

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<sup>50</sup> Including dial-up revenues

<sup>51</sup> Fixed voice minutes shown here are likely to be understated as they do not fully capture the use of VoIP services

<sup>52</sup> <http://media.ofcom.org.uk/news/2015/mno-variations/>

technologies will lead to further changes in how we communicate and interact as a society. A report published by Nokia Bell Labs<sup>53</sup> has predicted that by 2020 daily global demand for mobile data will be between 30 and 45 times that in 2015 (and in Western Europe usage will be 21 to 31 times 2005 levels).<sup>54</sup>

The total number of fixed broadband connections increased by 0.9 million (3.9%) to 24.7 million in 2015, while the number of superfast broadband connections (i.e. connections providing actual speeds of at least 30Mbit/s) rose by 2.0 million (28.7%) to 9.2 million during the year, equivalent to 37.1% of all connections (a year-on-year increase of seven percentage points). This has led to average actual speed increases, from 22.8Mbit/s in November 2014 to 28.9Mbit/s in November 2015, and the increase in fixed broadband revenues noted previously.

There are a range of initiatives aimed at improving fixed broadband coverage overall. The Government recently announced plans to introduce a universal service obligation (USO) for broadband services.<sup>55</sup> This USO would give everyone in the UK the right to request a broadband connection at their residence providing actual download speeds of 10Mbit/s. Ofcom believes that a connection speed of 10Mbit/s is required to deliver an acceptable broadband user experience for a typical household.

Fixed broadband technology is also advancing. For example, BT announced plans for the roll-out of G.fast technology (which can provide speeds of up to 330Mbit/s over fibre-to-the-cabinet networks) and an increase in the footprint of its fibre-to-the-premise (FTTP) network (which can provide speeds of 1Gbit/s) to make 'ultrafast' broadband more widely available. Virgin Media announced investment of £3bn in early 2015<sup>56</sup> to roll out FTTP and cable connections to areas previously not connected to its network, while BT announced investments of £6bn across Openreach and EE.<sup>57</sup> Sky and TalkTalk have been trialling their 'ultra fibre-optic' service in York, offering speeds of more than 900Mbit/s over FTTP (which is also used to provide connections with headline speeds of 1Gbit/s by a number of 'alt-net' providers throughout the country).

These data are discussed in greater detail in the second and third sections of this chapter: *The Telecoms Industry* and *The Telecoms User*, which look at the telecoms sector from an industry and a consumer perspective respectively.

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<sup>53</sup> <https://pages.nokia.com/1503.bell-labs-mobility-report.html>

<sup>54</sup> Made up of Andorra, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Malta, Monaco, Netherlands, Norway, Portugal, San Marino, Spain, Sweden, Switzerland, United Kingdom

<sup>55</sup> <https://www.gov.uk/government/news/government-plans-to-make-sure-no-one-is-left-behind-on-broadband-access>

<sup>56</sup> <http://about.virginmedia.com/press-release/9467/virgin-media-and-liberty-global-announce-largest-investment-in-uks-internet-infrastructure-for-more-than-a-decade>

<sup>57</sup> <http://www.btplc.com/News/#/pressreleases/bt-to-invest-billions-more-on-fibre-4g-and-customer-service-1394948>

## 4.1.2 Industry metrics and summary

Figure 4.1 UK telecoms industry: key statistics

| UK Telecoms Industry  | 2010  | 2011  | 2012  | 2013  | 2014  | 2015  |
|---|-------|-------|-------|-------|-------|-------|
| Total operator-reported revenue (£bn)                               | 40.6  | 39.5  | 39.4  | 38.2  | 37.3  | 37.5  |
| Operator-reported retail revenue (£bn) (excl. CDS)                  | 27.8  | 27.9  | 28.3  | 28.1  | 28.2  | 28.7  |
| Operator-reported wholesale revenue (£bn)                           | 10.1  | 8.9   | 8.3   | 7.5   | 6.5   | 6.2   |
| Average monthly household telecoms spend (£, 2015 prices)           | 86.06 | 84.13 | 83.16 | 80.43 | 79.65 | 82.17 |
| Fixed access and call revenue (£bn)                                 | 9.3   | 9.0   | 8.7   | 8.7   | 8.4   | 8.4   |
| Fixed internet revenue (£bn)  | 3.3   | 3.5   | 3.7   | 4.0   | 4.6   | 5.1   |
| Fixed lines (millions)  | 33.4  | 33.3  | 33.4  | 33.4  | 33.5  | 33.2  |
| Fixed broadband connections (millions)                              | 19.6  | 20.7  | 21.8  | 22.8  | 23.7  | 24.7  |
| Superfast broadband connections (≥30Mbit/s, millions)               | 0.2   | 1.0   | 3.1   | 5.3   | 7.1   | 9.2   |
| Fixed voice call minutes (billions)                                 | 123   | 111   | 102   | 93    | 82    | 74    |
| Average actual residential fixed broadband download speeds (Mbit/s) | 6.2   | 7.6   | 12.0  | 17.8  | 22.8  | 28.9  |
| UK Superfast broadband premises coverage (%)                        | -     | -     | -     | -     | 75    | 83    |
| Mobile retail revenues (£bn)  | 15.1  | 15.4  | 15.9  | 15.5  | 15.2  | 15.2  |
| Mobile voice call minutes (billions)                                | 131   | 131   | 132   | 134   | 137   | 142.8 |
| SMS & MMS messages sent (billions)                                  | 129   | 150   | 151   | 129   | 110   | 101.3 |
| Mobile data volumes (PB)  | -     | -     | -     | 283   | 533   | 873   |
| Active mobile subscribers (millions)                                | 81.5  | 82.2  | 83.2  | 82.7  | 83.7  | 84.8  |
| 4G subscribers (millions)   | -     | -     | -     | 2.7   | 23.6  | 39.5  |
| 4G UK outdoor premises coverage, by at least one operator (%)       | -     | -     | -     | -     | -     | 90.5  |
| M2M subscribers (millions)  | 3.2   | 4.1   | 5.0   | 5.7   | 6.3   | 6.7   |

Source: Ofcom / operators

Notes: CDS refers to corporate data services; connection figures are at year-end; all revenue data excludes VAT and is in nominal terms except for average monthly household spend; fixed voice minutes shown here are likely to be understated as they do not fully capture the use of VoIP services.

## 4.1.3 The use of promotional discounts in the pricing of communications services

An emerging trend in the pricing of dual- and triple-play communications services is the increasingly sophisticated use of promotional discounting to attract new customers and retain existing ones.

In the past three years, the difference between 'standard' and 'promoted' prices<sup>58</sup> for dual- and triple-play bundled services has increased, as operators have offered large discounts in order to attract new customers. In many cases, 'loyalty' or 'retention' discounts are also available to customers who renegotiate tariffs on completion of their minimum contractual term, or are looking to switch to a competing provider. In this section, we concentrate on discounts offered to new customers; we have limited visibility into loyalty/retention discounts, as these are typically tailored to individual customers, and are not promoted or advertised.

<sup>58</sup> The standard price is the monthly 'list' price of the package excluding any discount offers, while promoted prices include all discounts and special offers.

The type and value of promotional discounts varies by operator – some offer one-time shopping vouchers while others offer discounts on monthly subscription fees for a set number of months (or, increasingly, over the entire minimum contractual term).

Promotional discounts tend to target customers purchasing bundled services, with the discount most frequently applied to the overall bundle price or the fixed broadband or TV elements of the bundle. Based on figures from Ofcom's Technology Tracker, household adoption of bundled services has increased; in 2016, 68% of households subscribed to bundled services, an eight percentage point increase compared to three years previously.

In contrast, fixed voice prices are rarely discounted in this way, and while almost all bundles that include fixed broadband and pay-TV offer promotional discounts to new subscribers, few such offers are available to consumers buying fixed voice services on a stand-alone basis. Nevertheless, certain other forms of discount are available such as line rental saver pre-payment tariffs.

With promotional discounting, providers can increase standard prices while keeping the price of the plan low to attract new customers. Promotions incentivise new consumers and those shopping around to switch provider, however, they also mean that consumers who are unengaged and do not switch provider or renegotiate prices after their minimum contractual period (i.e. out-of-contract customers) may end up paying more each month than those who are within their contract term.

Some recent examples of different service plans that highlight the trend of promotional discounts aimed at new customers include BT's Unlimited ADSL broadband plan: this has a standard price of £38.99 per month (£20 headline price plus £18.99 line rental<sup>59</sup>) in July 2016 but new customers receive a £7 per month promotional discount during the entire minimum contractual term, paying an effective price of £31.99 per month.

Similarly, in July 2016 TalkTalk's SimplyBroadband<sup>60</sup> package has a standard price of £25.20 (£7.50 headline price plus £17.70 line rental) but new customers pay a discounted price of £21.45 per month during the entire minimum contractual term. During the same time, Sky's customers of BB Unlimited<sup>61</sup> package pay £22.40 per month for the entire minimum contractual term, a discount of 18%, after which the standard price increases to £27.40. Further, Virgin Media's SuperFibre 50 and calls<sup>62</sup> package costs £36.99 in July 2016, but new customers pay £31.74 per month during the minimum contract period, a discount of 14%.

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<sup>59</sup> Prices for BT Unlimited Broadband with weekend calls as on 19 July 2016 from Pure Pricing UK Broadband Update, July 2016

<sup>60</sup> Prices for TalkTalk's SimplyBroadband from Pure Pricing UK Broadband Update, July 2016

<sup>61</sup> Prices for Sky's BB Unlimited + Free Weekend Calls from Pure Pricing UK Broadband Update, July 2016

<sup>62</sup> Prices for Virgin Media's SuperFibre 50 and calls from Pure Pricing UK Broadband Update, July 2016

**Figure 4.2 Examples of different promotional tariffs from BT, Sky, Virgin Media and TalkTalk for July 2016**

| Service provider | Plan  | Tariff per month (£) |                     | Discount received by new customers (%) |
|------------------|---|----------------------|---------------------|--|
|                  |   | Standard             | Including promotion |  |
| BT               | Unlimited ADSL broadband + Free Weekend Calls | 38.99                | 31.99               | 18.0%                                  |
| Sky              | Sky BB Unlimited                              | 27.40                | 22.40               | 18.2%                                  |
| TalkTalk         | SimplyBroadband                               | 25.20                | 21.45               | 14.9%                                  |
| Virgin Media     | SuperFibre 50 and calls                       | 36.99                | 31.74               | 14.2%                                  |

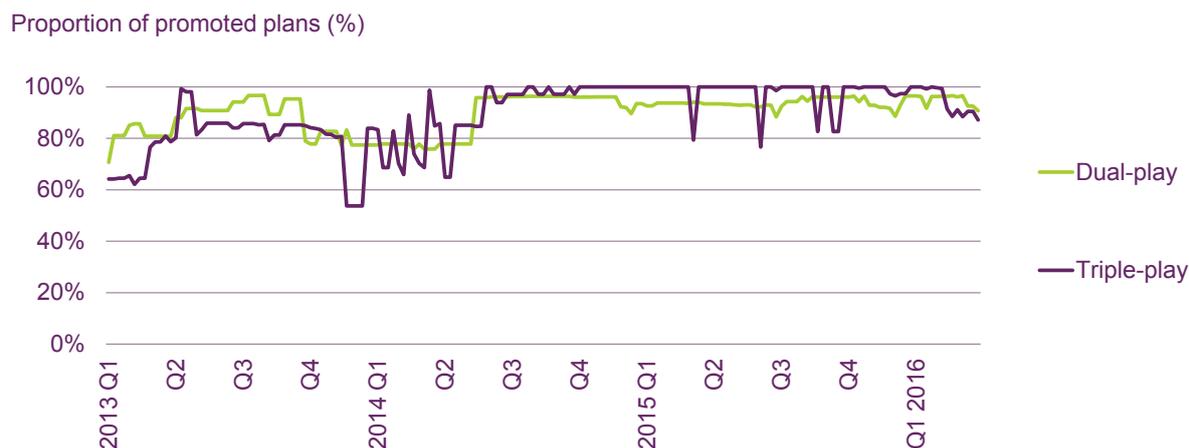
Source: Ofcom, *Pure Pricing UK Broadband Updates*

Note: Tariff including promotional discounts are calculated across each service’s minimum contractual term

### The prevalence and depth of promotional discounts is increasing

On average, 94% of all dual-play plans and 98% of triple-play plans offered by the UK’s four largest residential fixed telecoms providers (BT, Sky, TalkTalk and Virgin Media) had some element of discounts in 2015, compared to 86% of dual-play and 79% of triple-play plans offered in 2013. Between Q4 2014 and Q4 2015, there have been periods where all triple-play plans offered by these providers had some element of promotional discounting.

**Figure 4.3 Plans with promotions as percentage of total plans for dual/triple-play services**

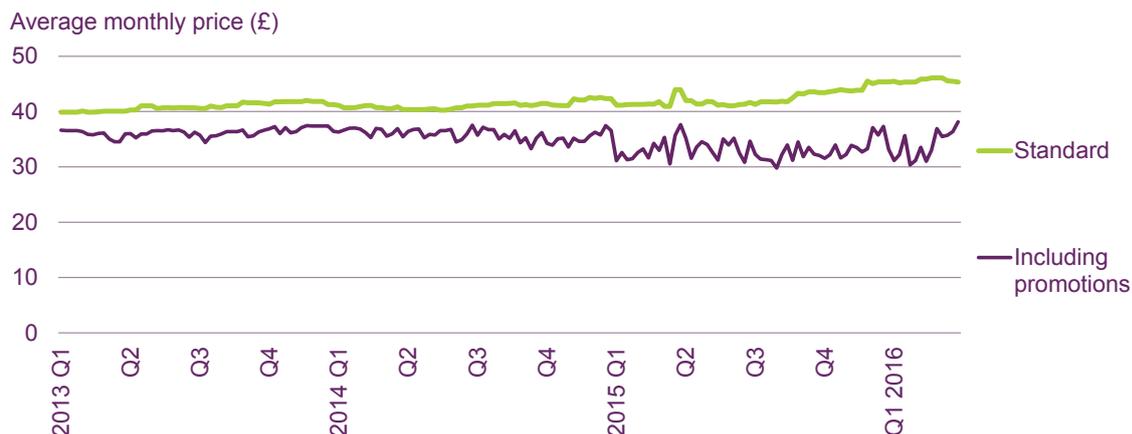


Source: *Simplify Digital*

Note: Includes tariffs for the four largest providers – BT, Sky, Virgin Media and TalkTalk.

The increasing prevalence and depth of promotional discounts is also demonstrated by the fact that while the average monthly dual-play (voice and broadband) standard prices offered by BT, Sky, Virgin Media and TalkTalk increased by 14% in the three years to Q1 2016, the monthly price including promotions fell by 6%.

**Figure 4.4 Average monthly standard and discounted tariffs for dual-play bundles**

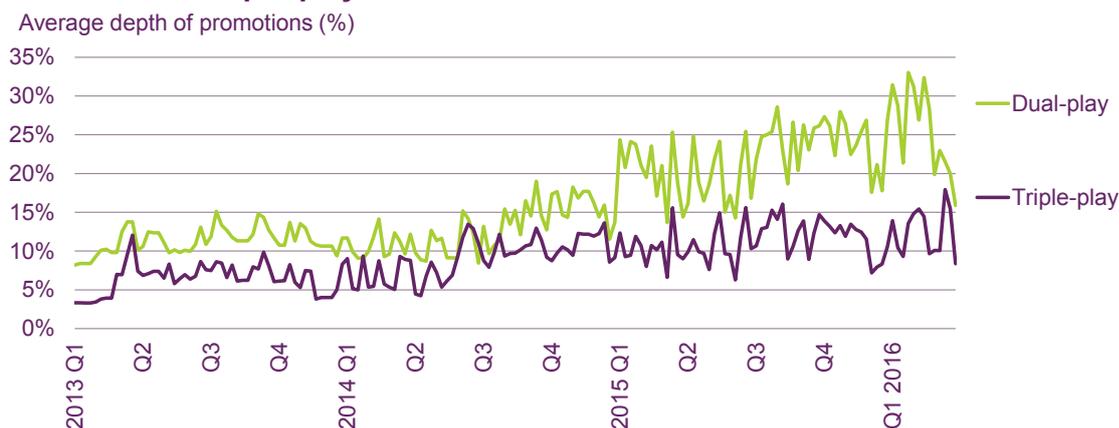


Source: Simplify Digital

Note: The average monthly cost is calculated across each service's minimum contractual term. Includes tariffs for the four largest providers – BT, Sky, Virgin Media and TalkTalk.

The average depth of promotions, i.e. the value of the promotion as a proportion of the total price of the service over its minimum contractual term, has continued to increase over the past three years, gathering pace in 2015. Recently, some plans have offered discounts worth over 60% of the monthly price of the package. Based on the plans offered by BT, Sky, TalkTalk and Virgin Media, the average promotional depth for dual-play bundles (i.e. fixed voice and broadband) increased from 10% in Q1 2013 to 26% in Q1 2016. Over the same period, average promotional depth for triple-play (fixed voice, broadband and pay-TV) increased from 5% to 13%.

**Figure 4.5 Promotions as a proportion of total monthly price for dual-play and triple-play bundles**



Source: Simplify Digital

Note: The average monthly price is calculated across each service's minimum contractual term; includes tariffs offered by the UK's four largest residential fixed telecoms providers – BT, Sky, Virgin Media and TalkTalk.

In Ofcom's Annual Plan 2016/17, we committed to monitor price increases, provide advice and information on pricing, and make sure all consumers receive value from their communications providers, including protecting consumers who are not engaged with the market.<sup>63</sup> Understanding the implications of the increased use of price discounting is an important part of this and we are planning to publish a study on pricing trends in the market later this year.

<sup>63</sup> <http://www.ofcom.org.uk/content/about/annual-reports-plans/ann-plans/1560620/Annual-Plan-2016-17.pdf>

## 4.2 The telecoms industry

### 4.2.1 Introduction

In this section of the report, we examine recent trends in the telecommunications market with regard to industry revenues, subscribers and volumes. This section is divided into five sections:

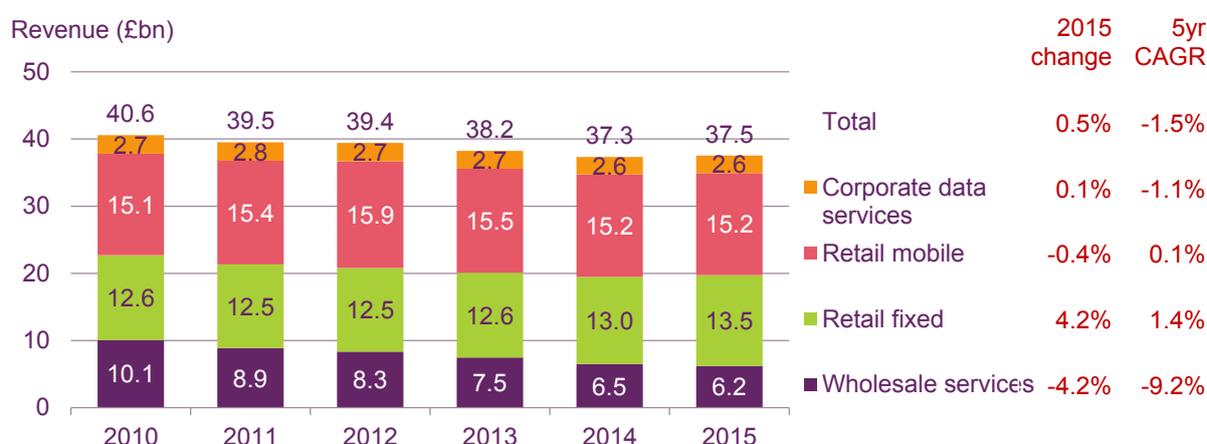
- Market overview: top-level findings from the UK telecoms industry
- Fixed voice: covers the fixed-line telephony market
- Fixed data: covers the fixed broadband market
- Mobile voice and data: covers mobile voice telephony, mobile messaging, mobile data, mobile broadband and machine-to-machine communications.
- Business markets: covers mobile and fixed voice and broadband business services.

### 4.2.2 Market overview

#### Total telecoms revenues rose by 0.5% to £37.5bn in 2015

In total, UK telecoms services generated £37.5bn in revenues in 2015, a £0.2bn (0.5%) nominal rise compared to 2014 and £3.0bn (7.5%) less than in 2010. The largest decline in 2015 was a £0.3bn (4.2%) fall in wholesale revenues, which was largely due to falling mobile call termination rates. Retail fixed telecoms revenues rose by £0.5bn (4.2%) to £13.5bn during the year as a result of a £0.6bn increase in fixed internet revenues (driven primarily by increasing superfast broadband take-up). Revenue from corporate data services rose by 0.1% to £2.6bn in 2015.

**Figure 4.6 Summary of UK telecoms revenues**



Source: Ofcom / operators, with the exception of corporate data services, sourced from IDC.  
 Notes: 'Corporate data services' comprises web hosting, Ethernet, IP VPN, digital leased line, corporate VoIP and frame relay/ATM services; wholesale mobile comprises wholesale mobile voice, messaging and data services, mobile voice and SMS termination revenue and wholesale inbound roaming revenue (i.e. revenue from overseas operators when their subscribers use UK networks).

## Total voice call volumes fell by one per cent to 217 billion minutes in 2015

The substitution of voice calls for text-based forms of communication (such as email, messaging through social media websites and instant messaging) continued in 2015, partly due to growing levels of smartphone use. This resulted in the continued decline in total voice call volumes, as a fall in fixed-originated call volumes was partly offset by increasing mobile-originated call volumes.

Fixed-originated voice call volumes fell by 9.2% to 74 billion minutes during the year, a slightly slower rate of decline than the 11.8% fall recorded in 2014. The 3.9% increase in mobile-originated call volumes in 2015 (to 143 billion minutes) was higher than the growth recorded in 2014 and, overall, total voice call volumes fell by 1.0% to 217 billion minutes in 2015. This was a lower rate of decline than the 3.1% average annual fall recorded between 2010 and 2015, and the proportion of total voice calls that were mobile-originated increased from 62.7% to 65.8% during the year.

**Figure 4.7 Outgoing fixed and mobile voice call volumes**



Source: Ofcom/ operators

## UK mobile subscriptions rose 2% to 91.5 million in 2015

At the end of 2015 there were 91.5 million UK mobile subscriptions, including handset subscriptions, dedicated mobile broadband data connections and M2M connections. This was an increase of 1.6 million connections (1.8%) compared to the previous year, mainly due to a 0.8 million increase in the number of mobile voice connections (the number of M2M and dedicated mobile broadband connections both increased by 0.4 million - see section 4.2.5 for more details).

Despite rapidly declining fixed voice call volumes, there has been relatively little change in the number of UK fixed lines (including PSTN lines and ISDN channels) over the past few years, and at the end of 2015 there were 33.2 million such lines, a small (1.0%) decline since the end of 2014.

**Figure 4.8 Fixed lines and mobile subscriptions**



Source: Ofcom / operators

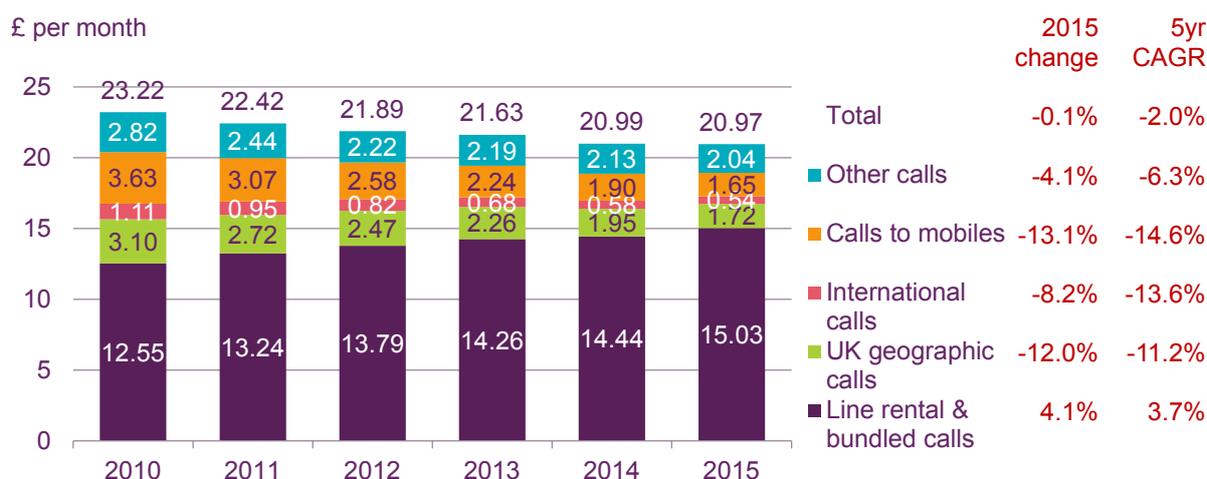
Note: Mobile subscriptions include M2M

### 4.2.3 Fixed voice services

#### Average revenue per fixed voice connection fell by 0.1% to £20.97 per month in 2015

Average revenue per fixed line fell by two pence per month (0.1%) in 2015, to £20.97. This decline was lower than the 8.3% fall in average fixed voice call volumes per line in 2015 (see Figure 4.10), indicating that fixed voice prices increased during the year. As is shown in Figure 4.9, the largest increase in average spend per line was in line rental and bundled calls, which partly reflects continued increases in line rental prices; for example at the end of 2015 BT's standard line rental (including VAT) was £17.99 per month, a 35% increase compared to the £13.29 fee five years previously.

**Figure 4.9 Average monthly retail voice revenue per fixed line**



Source: Ofcom / operators

Note: Figures exclude VAT

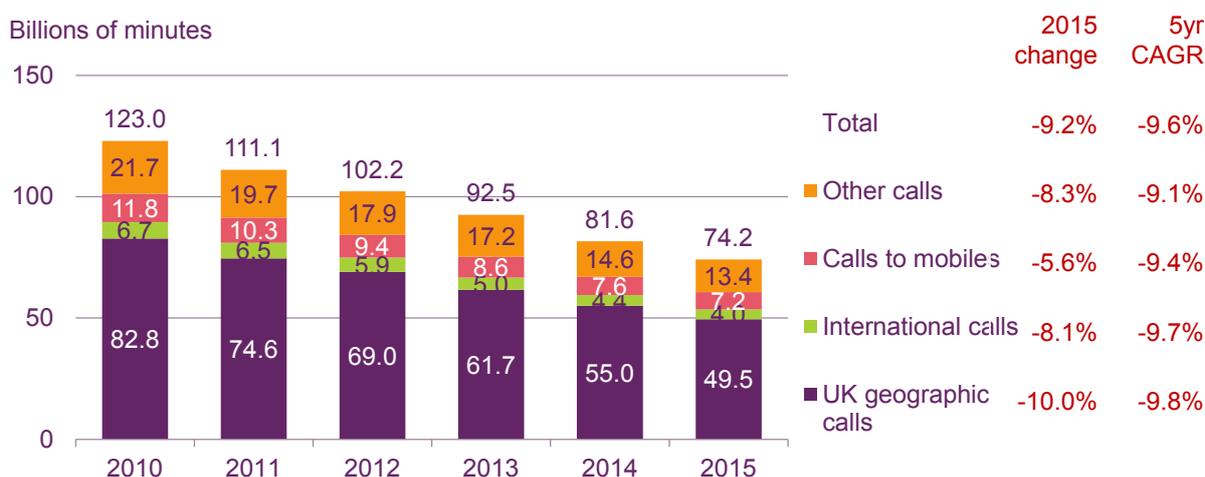
#### Fixed-originated voice call volumes declined by 9.2% in 2015

Fixed voice call volumes fell in 2015, despite the number of lines remaining relatively static during the year (see Figure 4.11). This decline was driven by increasing fixed-to-mobile call substitution, as shown in Figure 4.7, and increasing used of text-based forms of

communication, such as email and instant messaging, including those services provided by social networking sites, which is partly the result of growing smartphone use.

The decline in fixed voice call volumes slowed in 2015, with total outgoing call minutes falling by 7.5 billion minutes (9.2%) to 74.2 billion minutes during the year. This fall was lower than the annual average change in the five years to 2015 (a 9.6% fall). Volumes fell for all of the call types outlined below, with rates of declines ranging from a 10.0% fall in calls to UK geographic call minutes to a 5.6% fall in calls to mobiles. As was the case in previous years, calls to UK geographic numbers accounted for the majority (67%) of total fixed call volumes in 2015.

**Figure 4.10 Fixed voice call volumes, by type of call**



Source: Ofcom / operators

Note: VoIP call volumes are not fully captured in this chart and so totals may be understated

### In contrast to fixed call volumes, the number of fixed lines continues to be resilient

The total number of fixed lines has remained relatively stable over the last few years, despite fixed-originated voice call volumes having declined significantly (Figure 4.10). At the end of 2015 there were 33.2 million UK PSTN lines and ISDN channels, a fall of 0.3 million (1.0%) compared to 2015. In the five years to 2015, a decline in the number of business lines (down by 2.0 million) has been partly offset by a 1.8 million increase in the number of residential connections.

As shown in section 4.2.7, the fall in the number of business lines is due to the declining use of PSTN and ISDN (down 4.0% and 4.7% respectively) and increasing take-up of VoIP calls as an alternative to traditional fixed voice calls (VoIP connections are not fully captured here). Conversely, growth in the number of residential lines is the result of increasing fixed broadband take-up (as most UK homes need a fixed voice line in order to be able to receive fixed broadband services), along with growth in the number of households. Ofcom market research conducted in 2016 suggests that 73% of those with a landline phone at home said that they used it for internet access, with 45% stating that internet access was the most important reason for having a landline, compared to 15% of who said that making/receiving calls was the most important use.

**Figure 4.11 Number of fixed lines**



Source: Ofcom / operators

#### 4.2.4 Fixed data services

##### Fixed internet revenue growth continues due to increased fibre take-up

Non-corporate internet revenues (i.e. those generated by residential and SME users) totalled £5.1bn in 2015, a £0.6bn (12.6%) increase compared to 2014. Almost all of this revenue was generated by fixed broadband services, as estimated narrowband revenues were less than £1m in 2015. The main reason for the increase in total residential and SME fixed broadband revenues in 2015, as was the case in 2014, was the continued migration of UK consumers onto superfast services, which typically cost around £10 per month more than standard broadband services.

**Figure 4.12 Retail residential and SME fixed internet revenues**



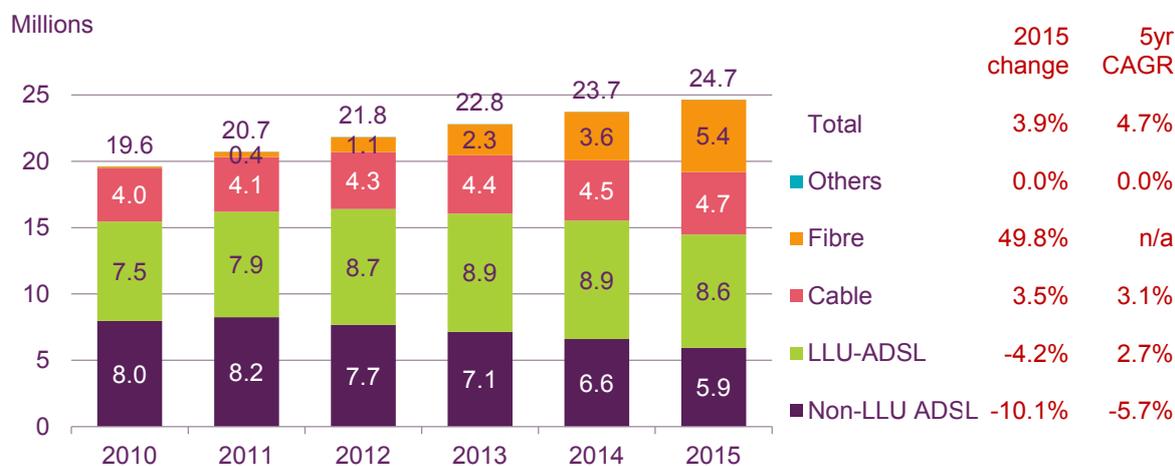
Source: Ofcom / operator data

##### The number of broadband connections delivered over NGA technology increased by two million in 2015

At the end of 2015 there were 24.7 million residential and SME UK fixed broadband lines, representing a 0.9 million (3.9%) increase since 2015. The total number of non-LLU ADSL lines fell by 10.1% to 5.9 million during the year, while the number of LLU ADSL lines fell for

the first time by 4.2%, to 8.6 million.<sup>64</sup> The main reason for the decline in ADSL lines is consumers migrating onto next generation access (NGA)<sup>65</sup> broadband services: the number of fibre-based fixed broadband lines grew by 49.8% during the year, up from 3.6 million to 5.4 million, while the number of cable broadband lines continued to show steady growth, increasing by 0.2 million (3.5%) to 4.7 million. BT, the largest provider of retail broadband reported that 48% of its customers were on fibre products in Q4 2015.<sup>66</sup> Although these services are generally more expensive than ADSL, for many consumers the higher connection speeds and better user experience that they offer justifies this increase in price.

**Figure 4.13 Retail fixed broadband lines**



Source: Ofcom / operator data

### The proportion of connections with a headline speed of ‘up to’ 30Mbit/s or higher rose by nine percentage points to 42% in 2015

The proportion of residential broadband lines that were fibre or cable connections with an advertised speed of ‘up to’ 30Mbit/s or higher was 42% in November 2015, a nine percentage point increase compared to a year previously. This growth is the result of consumer demand for greater bandwidth, as multiple users in the home share bandwidth, using multiple devices to access a growing number of web-based services including video streaming and online games.

Both BT and Virgin Media have invested significantly in network upgrades, increasing the speeds that are available to consumers and enabling more homes to access superfast services. In total, connections advertised as ‘up to’ 10Mbit/s or higher accounted for 93% of residential connections in November 2015. The proportion of residential broadband lines with an advertised headline speed of ‘up to’ 8Mbit/s or less was less than 1% at the end of 2015.

However, actual speeds are frequently lower than advertised speeds, and data from Ofcom’s Connected Nations 2015 report<sup>67</sup> show that 2.4 million households were unable to receive

<sup>64</sup> The number of LLU-ADSL connections shown above is lower than the total number of LLU lines shown in Figure 1.32 as some LLU lines are used to provide fibre broadband services rather than ADSL.

<sup>65</sup> Lines using fibre and cable access technology that are technologically capable of providing superfast speeds but may not always provide these. Around 12% of FTTC connections will not provide superfast speeds.

<sup>66</sup> <http://www.btplc.com/Sharesandperformance/Quarterlyresults/Investormeetingpack.pdf>, slide 61

<sup>67</sup> <http://stakeholders.ofcom.org.uk/market-data-research/market-data/infrastructure/connected-nations-2015/>

access line speeds of 10Mbit/s or more in June 2015. This may be due to long line lengths, old wiring or a variety of other factors. Alternative technologies and solutions are being investigated as part of the Government-announced broadband USO, which aims to provide a right to connectivity with download speeds of at least 10Mbit/s.

**Figure 4.14 UK residential broadband lines, by headline speed**



Source: Ofcom, based on data provided by the UK's largest ISPs by retail market share (representing over 90% of the total market).

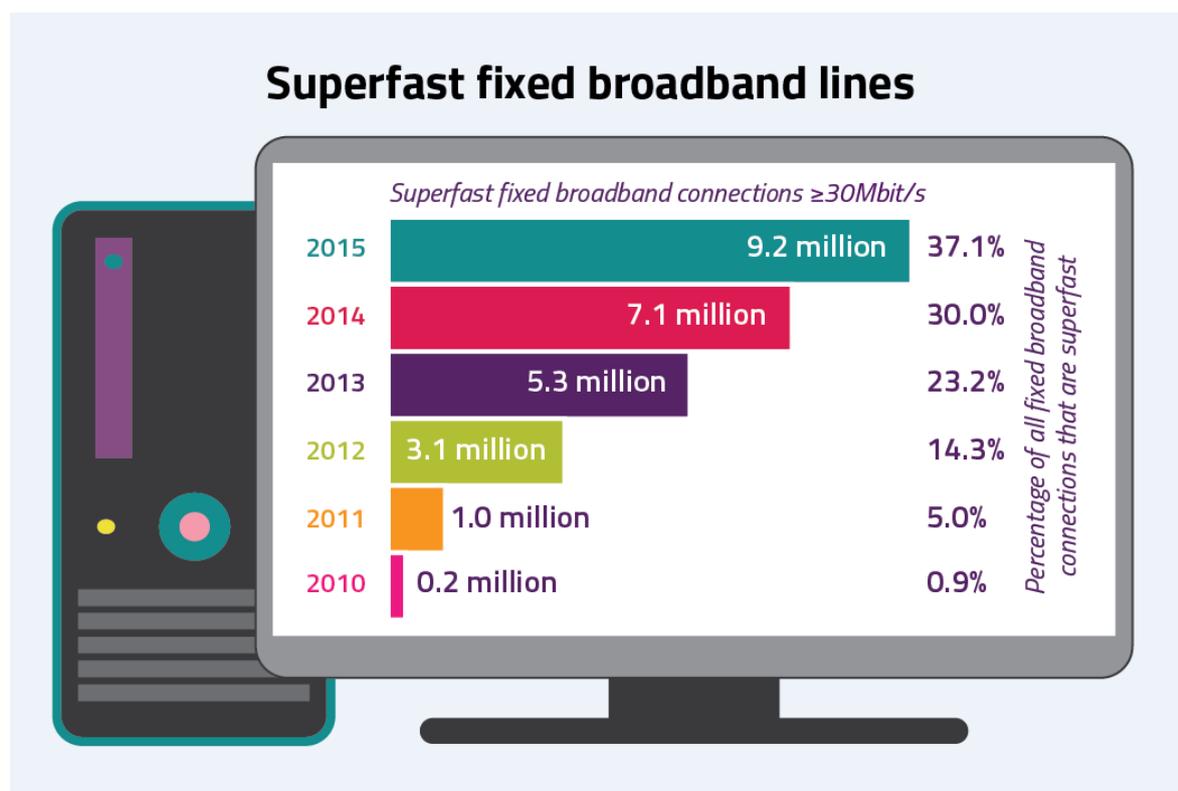
Note: The above 'up to' 10Mbit/s and less than 'up to' 30Mbit/s category includes ADSL2+ lines which are not marketed using a connection speed.

### Over a third of all fixed broadband lines were providing superfast (≥30Mbit/s) speeds at the end of 2015

At the end of 2015, 37.1% of fixed-line broadband connections were providing actual speeds of 30Mbit/s or more (9.2 million connections). This was a year-on-year increase of 2.0 million (23.9%) and has increased from 0.2 million connections in 2010. These speeds are only available over fibre or cable connections.

Superfast speeds will enable a greater number of concurrent users on a single broadband connection to access the internet, as well as enabling users to carry out tasks that are difficult on slower connections, such as UHD video streaming and downloading large files.

Figure 4.15 Superfast fixed broadband lines



Source: Ofcom / operators

Notes: Includes estimates where Ofcom does not receive data from operators; includes Ofcom adjustment to exclude FTTC connections delivering less than 30Mbit/s.

#### The average actual speed of a residential UK fixed broadband connection was 28.9Mbit/s in November 2015

The average speed of a UK fixed broadband connection in November 2015 was 28.9Mbit/s. This had increased from 22.8Mbit/s (up by 26.9%) in November 2014, and from 6.2Mbit/s in the five years to November 2015 (an average increase of 36.0% year on year). While there has been a very large increase in the UK average residential fixed-line download speed, many households do not have access to services with high speeds. The USO will look to provide a right to broadband with speeds capable of enabling most day-to-day tasks that an average family household will carry out on the internet.

Fixed broadband ARPU has also increased between 2010 and 2015, up 11.7% in real terms to £18.57 in 2015. The increase in ARPU since 2013 has been proportionally lower than the average actual speed increases over the same period. The main factors behind the rises in average fixed broadband speed are, the investment of operators in network infrastructure, the increasing availability of higher speed connections, growing demand for access to higher-speed connections and the increased residential take-up of superfast connections.

**Figure 4.16 Average actual residential fixed broadband download speeds and real average revenue per connection**



Source: Ofcom, using data provided by SamKnows

Note: November 2010 data are for Nov/Dec 2010; average speed data are for November of each year; average revenue per user includes VAT and is adjusted for CPI

**BT continued to be the UK’s largest fixed broadband provider in 2015**

BT maintained its position as the UK’s largest provider of residential and SME fixed broadband services in 2015, with a market share of 32%. Sky’s market share continued to grow, reaching 23%, as it continued to migrate its pay-TV customers onto triple-play bundles, including landline and fixed broadband services. Virgin Media’s market share fell by one percentage point to 19%, despite growth in the number of connections, while TalkTalk experienced a drop of one percentage point to 13% in 2015.

**Figure 4.17 Retail fixed broadband market shares**



Source: Ofcom / operator data

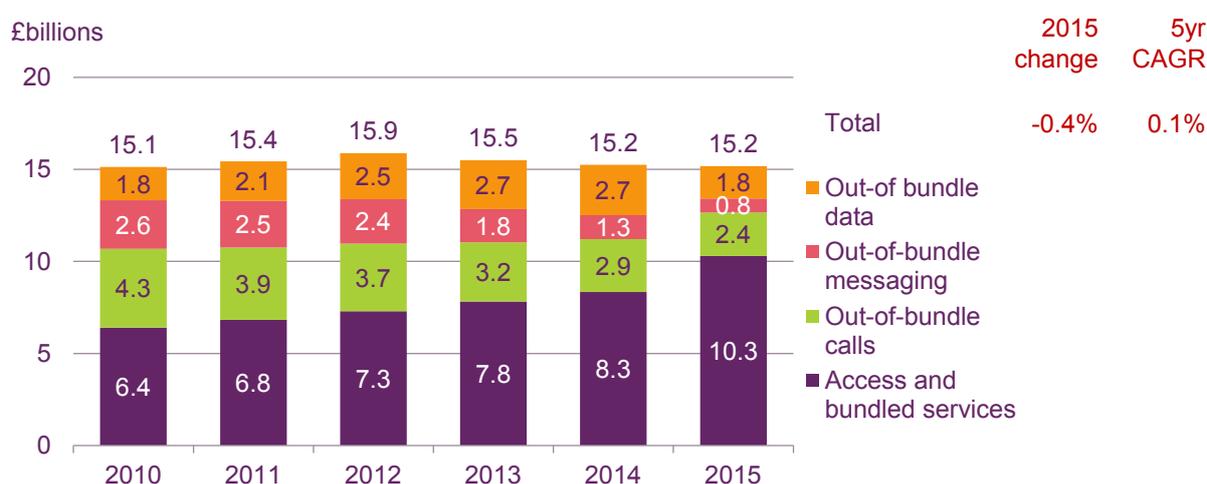
Note: BT and EE are shown separately, as the merger between these two organisations was not completed until 2016

## 4.2.5 Mobile voice and data services

### Falling out-of-bundle revenues were offset by a rise in access and bundled services revenue in 2015

Total mobile retail revenue fell by £63.9m (0.4%) in 2015, in contrast to the 0.1% average annual growth rate over the five years to 2015. One of the main operators redefined how it reports bundled and out-of-bundle revenues in 2015, meaning that it is not possible to maintain exact like-for-like comparisons between 2015 and previous years within the individual revenue categories.

**Figure 4.18 Mobile retail revenue, by service**



Source: Ofcom/ operators

### Average monthly retail revenue per mobile subscription fell by 2.6% in 2015

Average monthly retail revenue per mobile subscription fell by £0.40 (2.6%) to £14.97 in 2015. This reflected falling average revenues per user for both post-pay and pre-pay subscriptions in the year, when the percentage decline in average revenue per pre-pay user (down 4.9% to £4.75 per month) was greater than that for post-pay subscriptions (down 4.4% to £22.11 per month).

Along with falling prices and declining SMS and MMS use, a key reason for falling average revenues was the migration of higher-use pre-pay customers onto post-pay services during the year (see Figure 4.20 for more details). While average retail revenue per mobile subscription has dropped, data use on mobiles increased rapidly; in 2015 total UK mobile data use was 873PB, a 63.7% increase compared to 533PB in 2014,<sup>68</sup> largely as a result of growing smartphone use.

The ways in which consumers purchase mobile phone services has evolved as the underlying tariffs have changed, blurring the division between pre-pay and post-pay. Historically, pre-pay and post-pay reflected the limitations of different billing platforms and became established as two separate consumer segments. But as consumer demands have changed and billing platforms have evolved, the clear division between pre- and post-pay no longer exists. There are now rolling post-pay contracts, that can be amended or cancelled each month with no penalty, as well as pre-pay bundles that have the option to be auto-renewable.

<sup>68</sup> One petabyte (PB) is made up of 1,000,000 gigabytes (GB)

**Figure 4.19 Average monthly retail revenue per mobile subscription**



Source: Ofcom / operators

Note: Mobile voice revenues include revenues from bundled messaging and data services; In Q1 2015, one MNO changed reporting to include SMS and data revenues in bundles; this was previously split into the relevant voice/SMS/data sections.

All figures are nominal.

**The proportion of mobile subscriptions that were post-pay increased by 1.6 percentage points to 63.4% in 2015**

At the end of 2015, 63.4% of UK mobile connections were post-pay, a 1.6 percentage point increase compared to the 61.8% recorded in 2014. The proportion of post-pay consumers has increased over recent years, partly because mobile operators have made post-pay tariffs more attractive than pre-paid as, on average, post-pay subscribers spend more than pre-pay subscribers. Increasing smartphone take-up is also likely to be a contributing factor, as consumers can spread the cost of the smartphone devices over the length of their post-pay contract. As mobile data volumes increase, the proportion of connections that are post-pay may also increase, as it is typically expensive to consume larger quantities of data on pre-pay tariffs.

**Figure 4.20 Mobile subscriptions, by pre-pay and post-pay**



Source: Ofcom / operators

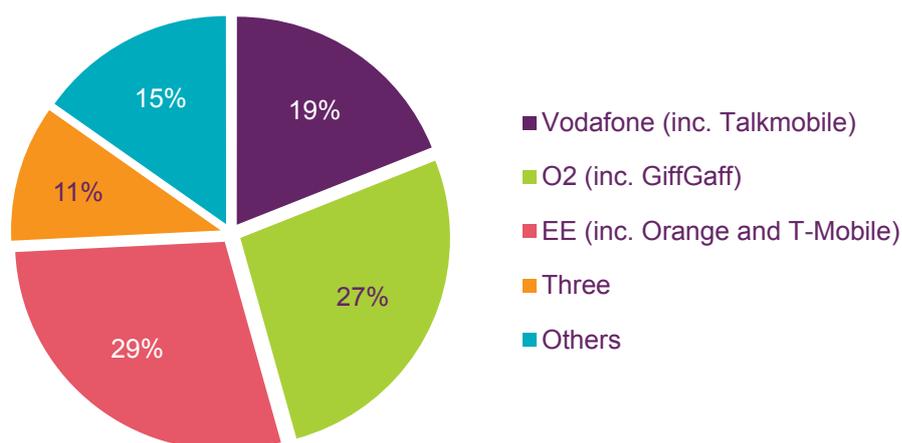
Note: Includes M2M

## EE was the largest provider in terms of retail mobile subscriptions at the end of 2015

Including its legacy Orange, and T-Mobile brands, EE was the largest UK mobile provider in terms of retail subscriptions<sup>69</sup> at the end of 2015, with a market share of 29% (Figure 1.21). The second and third largest providers were O2 (with a 27% retail subscription share) and Vodafone (at 19%), in both cases including customers using their wholly-owned MVNO services (GiffGaff in the case of O2 and Talkmobile for Vodafone). Three's retail subscription market share was 11% at the end of the year.

Mobile Virtual Network Operators (MVNOs) and resellers, who all use the one or more of four main UK providers' network infrastructure to offer services to end users, had a combined market share of 15% at the end of 2015. The operators included in this category include Tesco Mobile, Virgin Mobile, Lycamobile and Lebara.

**Figure 4.21 Retail mobile subscription shares, by provider: Q4 2015**



Source: Ofcom / operators

Note: Excludes M2M subscriptions

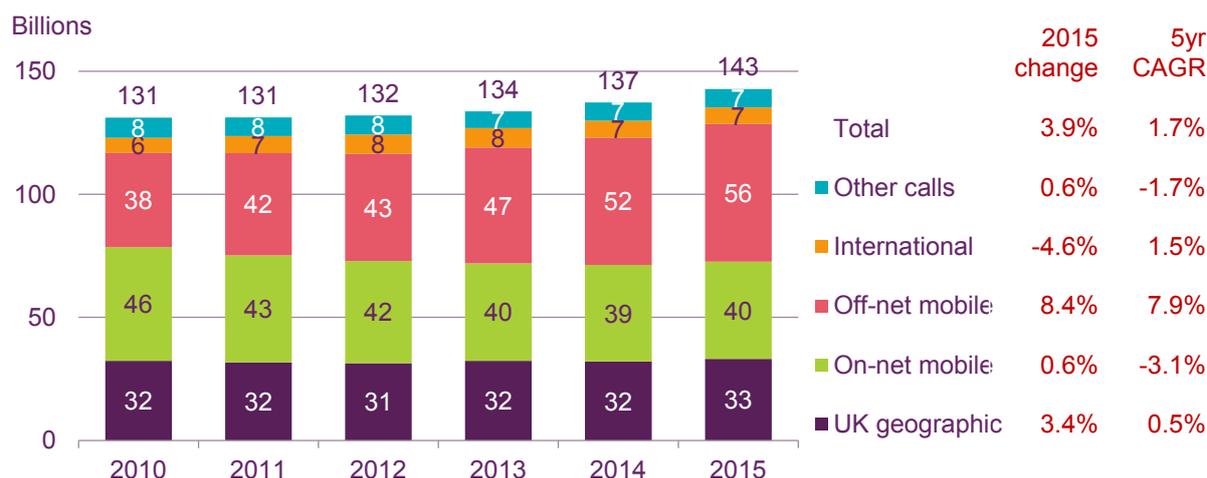
## Total outgoing mobile call minutes increased by 3.9% in 2015

Data provided to Ofcom by the UK's mobile operators show that outgoing mobile call volumes increased by five billion minutes (3.9%) to 143 billion minutes in 2015. Calls to mobiles continued to account for the majority of outgoing mobile calls during the year (67% of the total, up from 66% in 2014), with the proportion of these calls that were to mobiles on the same network falling from 43% to 41% during the year.

Call volumes to UK geographic numbers increased by 3.4% to 33 billion minutes in 2015, while call volumes to international destinations fell by 4.6% during the year. The biggest increase was in call volumes to off-net mobiles, which increased by 8.4% to 56 billion minutes during the year.

<sup>69</sup> Excluding M2M connections.

**Figure 4.22 Outgoing mobile call minutes, by type of call**



Source: Ofcom / operators

**Traditional mobile messaging use fell for the third consecutive year in 2015**

The total volume of outgoing SMS and MMS messages fell by eight billion messages (7.6%) to 101 billion messages in 2015, a smaller drop to those recorded in 2013 and 2014. The main reason for declining message volumes is increasing smartphone take-up, as more sophisticated handsets enable mobile users to access alternative communication methods such as email, instant messaging, including messaging services provided by handset makers and social networking sites (Figure 1.17).

**Figure 4.23 Outgoing SMS and MMS messages: 2010-2015**



Source: Ofcom / operators

**The total number of mobile subscriptions passed 90 million for the first time in 2015**

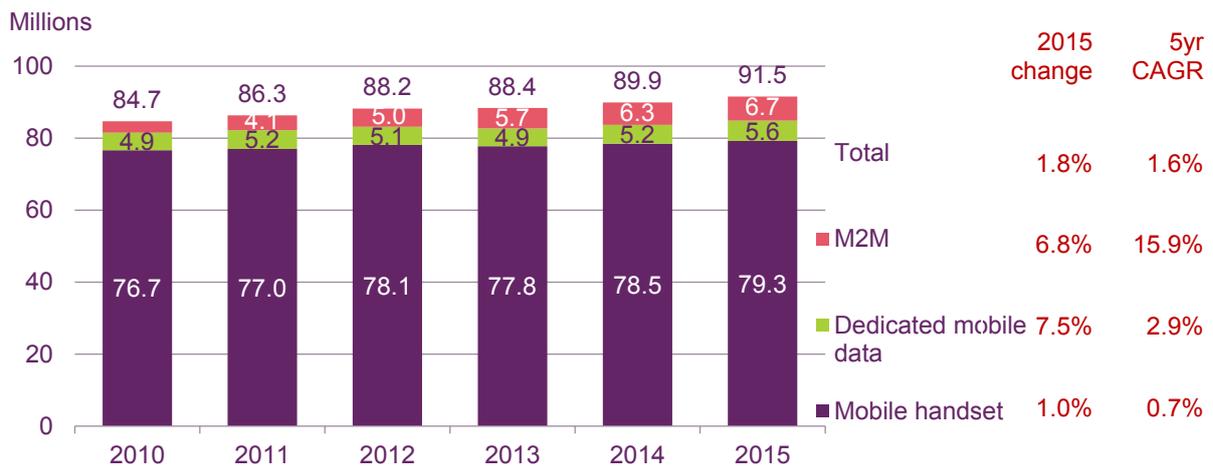
At the end of 2015 there was a total of 91.5 million active mobile handsets, dedicated mobile data connections (such as mobile broadband dongles and data-only SIMs) and M2M connections, a 1.6 million (1.8%) increase on the previous year. While there were 79.3 million mobile handset subscriptions in 2015, not all of these are used to access mobile data services. We estimate that 67% of mobile phones (53.1 million) were used to access the internet in 2015, up from 61% in 2014 (47.9 million).

## M2M and the Internet of Things

M2M stands for 'machine-to-machine'. The general definition of a M2M connection is a connection between devices, often wireless, where human input is not necessarily required. Commonly used examples of M2M are in smart metering (where the meter reports energy use back to a central billing database) or a burglar alarm, which may contain a SIM card to enable communication with monitoring offices. Vending machines are another common example, as some may use M2M technology to keep a central computer up to date with stock levels.

The Internet of Things (IoT) describes the creation of new and innovative services by the interconnection of everyday devices, often using M2M connections. Over the coming decade, the IoT is expected to grow to hundreds of millions of devices in the UK alone, bringing benefits to consumers across a number of sectors including transport, healthcare and energy.

**Figure 4.24 Mobile subscriptions, by connection type: 2010-2015**



Source: Ofcom / operators

### 4.2.6 4G mobile services

#### 4th generation (4G) mobile communications standard

4G stands for 4<sup>th</sup> generation, and relates to the 4<sup>th</sup> generation mobile communications standard, which allows internet access at higher speeds than previous standards. All premium smartphones can use 4G services while still being compatible with the previous standards, 2G and 3G.

The first commercial 4G service was launched in the UK in October 2012 by EE after it was granted a licence modification that allowed it to use its existing 1800MHz spectrum for 4G. The auction for 4G spectrum concluded in February 2013, with EE, Telefonica (O2), Vodafone, Three and Niche Spectrum Ventures Ltd (a BT Group subsidiary) receiving licences. Vodafone and Telefonica launched their 4G services in August 2013, and Three followed with a London-based release in December 2013, followed by national roll-out in March 2014.

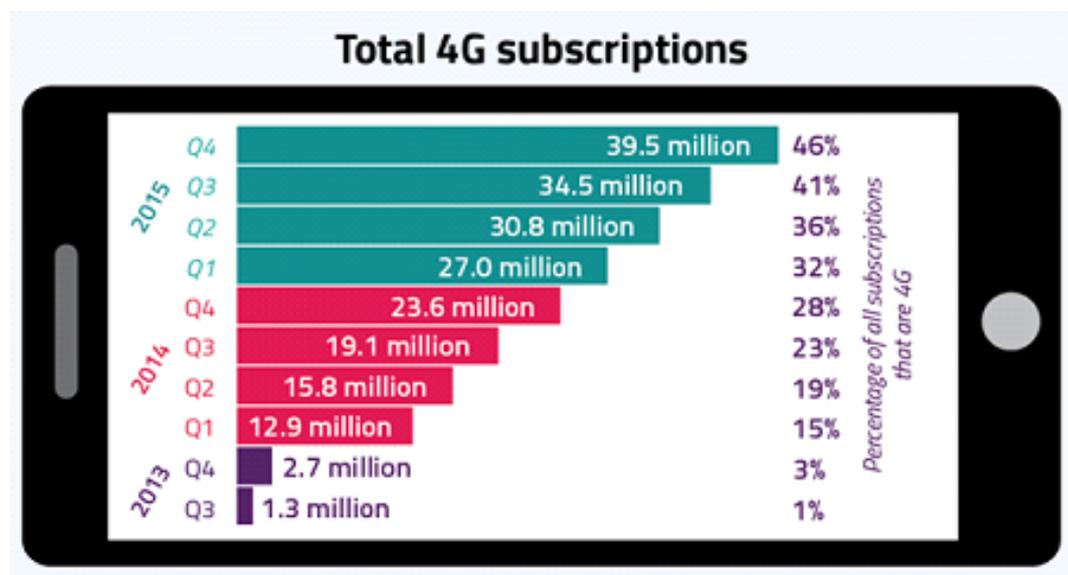
#### More than 45% of mobile connections were a 4G service in Q4 2015

By the end of 2015, 39.5 million mobile connections could access 4G services, an increase of 15.9 million (67.3%) compared to the year previously. This was equivalent to 46% of all

UK mobile connections (excluding M2M connections), an 18 percentage point increase. The proportion of connections that were 4G tripled between Q1 2014 and Q4 2015, illustrating the high levels of consumer demand for mobile data services in the UK.

The figures above are likely to overstate 4G mobile use as they include all consumers whose tariff allows them to access 4G mobile services, regardless of whether they have a 4G-enabled device or are in an area where their provider has 4G coverage.

**Figure 4.25 Total 4G subscription numbers**



Source: Operator data

Note: Includes all consumers whose tariff allows them to access 4G mobile services, even those without a 4G-enabled device or in areas where their provider has no 4G coverage.

### Over 70% of premises had outdoor 4G coverage from all four mobile operators

By May 2016, 97.8% of UK premises were in areas with outdoor 4G coverage in May 2016 in total, with 71.3% benefitting from similar coverage from all four mobile network operators and fewer than 10% of premises being covered by one or two operators.

Coverage varied significantly between urban and rural areas of the UK, with 99.2 % of premises in urban UK areas having outdoor 4G coverage, and 79.3% covered by all four operators compared to 88.9% of rural premises having outdoor 4G coverage from at least one operator, and just 21.0% having coverage from all four operators.

Ofcom maintains a mobile coverage checker at <http://maps.ofcom.org.uk/check-coverage> which can be used to check mobile coverage of 2G, 3G and 4G by postcode and by operator.

**Figure 4.26 Outdoor 4G premises mobile coverage, by number of operators**



Source: Ofcom / operators, May 2016 data

Note: Coverage is based on 100m<sup>2</sup> pixels covering the UK

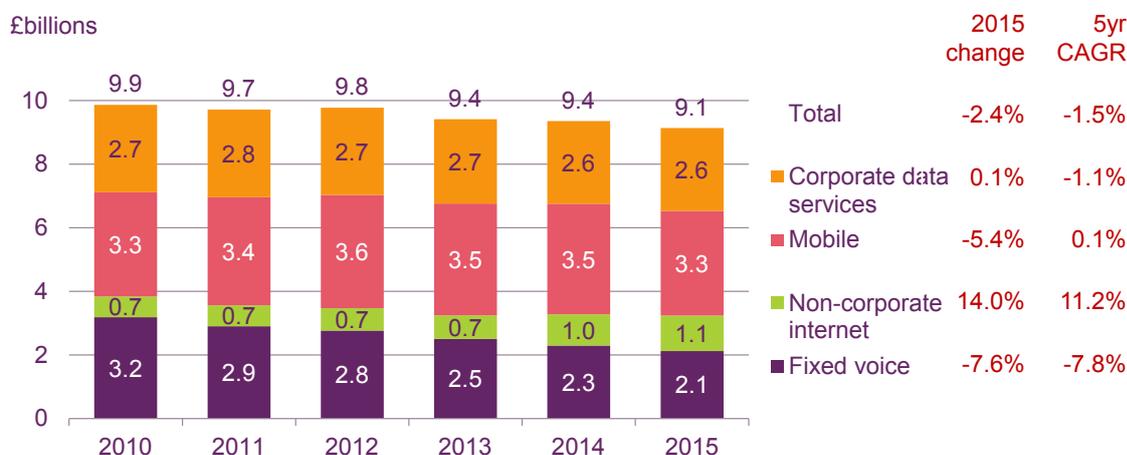
### 4.2.7 Business markets

**Business markets generated £9.1bn in revenue in 2015, a year-on-year decrease of 2.4%**

Total UK business telecoms revenues fell by £0.2bn (2.4%) to £9.1bn in 2015. This was driven by a £0.2bn (7.6%) decrease in fixed voice revenues and a £0.2bn (5.4%) fall in mobile revenues, partly offset by a £0.1bn (14.0%) increase in non-corporate internet services.

Business mobile revenues fell by 5.4% in 2015, in contrast to the 0.1% compound annual growth rate recorded in the five years to 2015. Fixed voice service revenues fell by £0.2bn (2.4%) in 2015, continuing the trend of falling average annual fixed voice business revenues (shown by the negative 1.5% five-year CAGR), although these revenues are likely to be understated as VoIP usage is not fully captured. Overall, business retail telecoms revenues accounted for 24.3% of total UK retail telecoms revenues in 2015, a 0.7 percentage point decrease since 2014.

**Figure 4.27 Retail business telecoms revenues, by service**



Source: Ofcom / operator data, with the exception of corporate data services, sourced from IDC

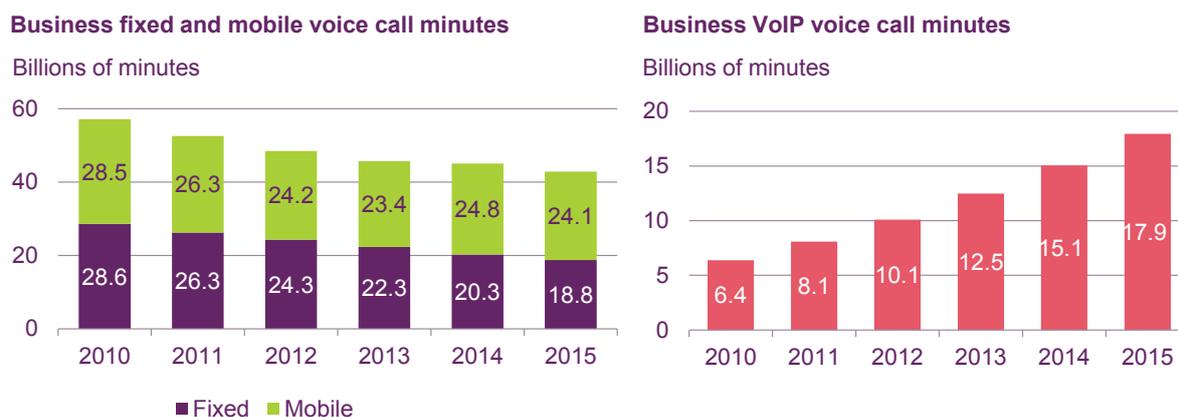
Note: Fixed voice figures exclude revenues from non-geographic voice calls; corporate data services comprises web hosting, Ethernet, IP VPN, digital leased line and frame relay/ATM services.

Business VoIP call volumes increased 19.1% year on year, while fixed and mobile call volumes fell in 2015

The proportion of business calls that originated on mobile networks was 56.2% in 2015, representing a 1.2 percentage point increase on 2014. Total business call volumes fell by 2.2 billion minutes (4.9%) in 2015, driven by a fall of 1.5 billion (7.5%) fixed business minutes and 0.7 billion (2.9%) mobile business minutes, although it is important to note that the fixed voice minutes shown here are likely to be understated as they do not fully capture the use of VoIP services.

Data provided to Ofcom by IDC suggest that UK businesses made 17.9 billion minutes of outgoing VoIP calls in 2015, a 19.1% increase on 2014. This increase was in line with the average year-on-year increase of 23.0%, observed since 2010, and suggests that Ofcom's operator data are likely to overstate the decline in business fixed voice call minutes.

**Figure 4.28 Business voice call minutes**



Source: Ofcom / operator data / IDC for VoIP data only

Note: VoIP volumes are not fully captured in the business fixed and mobile voice call minutes chart. It is not possible to sum the totals of both charts to calculate total business call volumes as some VoIP minutes may be included in the business fixed and mobile voice call minutes data.

### The total number of business fixed lines fell by 0.3 million in 2015

At the end of 2015 there were 7.6 million business fixed lines and ISDN channels, a year-on-year fall of 0.3 million (4.3%), and 2.0 million (21.0%) fewer than there had been at the end of 2010. During the year, the decline in the number of ISDN channels was higher than that of PTSN lines, at 4.7% compared to 4.0%. VoIP connections are not included in the business fixed-line figures, as the fragmented nature of the business VoIP market means that gaining accurate data on this sector is difficult. It is therefore likely that the total number of business fixed lines is understated. The number of SME broadband lines increased by 0.1 million (5.2%) in 2015. Between 2010 and 2015 SME broadband lines increased by 0.6 million (a five-year CAGR of 5.4%).

**Figure 4.29 Business fixed voice and SME fixed broadband lines**



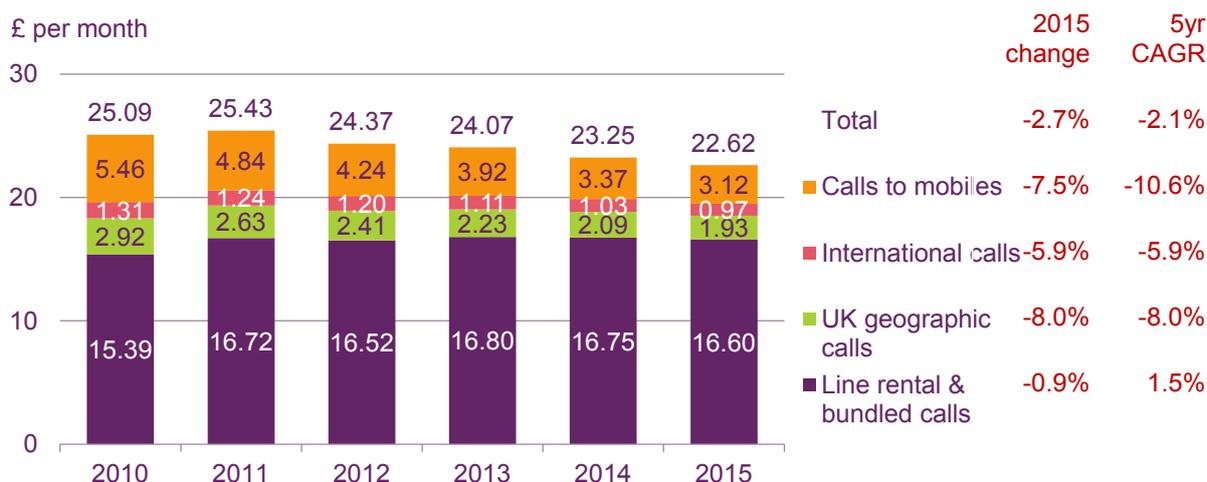
Source: Ofcom / operator data

Note: Mobile voice revenues include revenues from bundled messaging and data services.

### Average monthly retail revenue per business line fell by 2.7% in 2015

The decline in business monthly retail revenue per fixed line was due to falls in out-of-bundle UK geographic (8.0%), international (5.9%), line rental and bundled calls (0.9%) and to-mobile calls (7.5%) leading to a 2.7% decrease in overall retail revenues per business fixed line to £22.62. This was the second year running in which there was a fall in average business rental and bundled calls revenue per line. The proportion of monthly retail business revenue per fixed line that is accounted for by line rental and bundled calls has risen from 61.4% in 2010 to 73.4% in 2015; a 12.0 percentage point increase.

**Figure 4.30 Average monthly retail revenue per business fixed line**



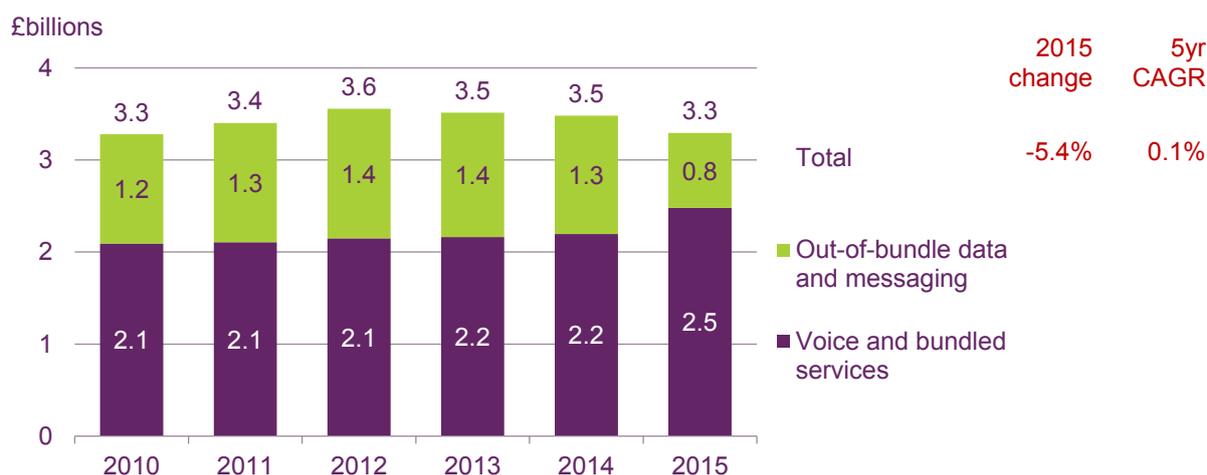
Source: Ofcom / operators

Note: Excludes revenues from non-geographic voice calls.

### Business mobile revenues fell by 5.4% to £3.3bn in 2015

Retail business mobile revenues totalled £3.3bn in 2015, a 5.4% decline compared to 2014. The in- and out-of-bundle revenue figures for 2015 cannot be directly compared to previous years, as one mobile operator changed its definitions relating to apportioning revenues into bundled or out-of-bundle categories.

**Figure 4.31 Breakdown of business mobile revenues**

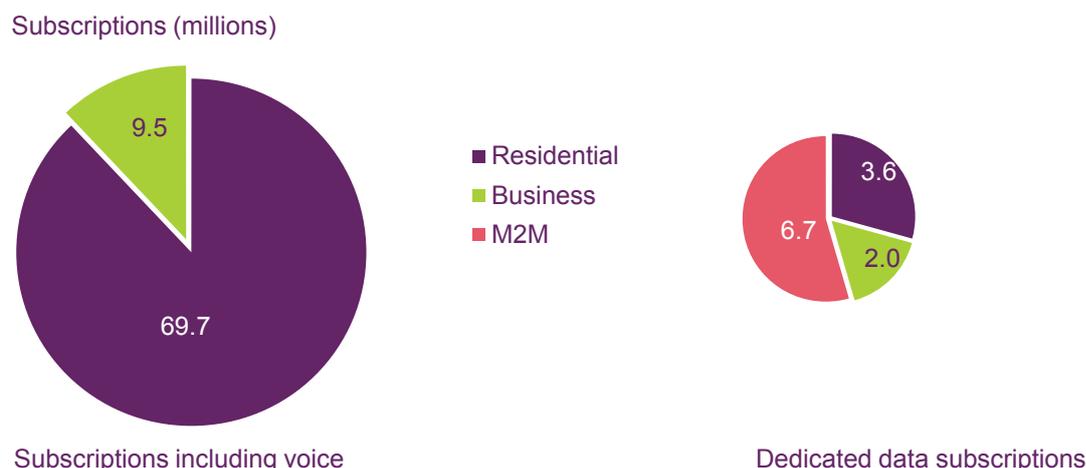


Source: Ofcom / operators

**Businesses accounted for 13% of all mobile connections at the end of 2015**

At the end of 2015 there were 9.5 million business mobile connections (excluding the 6.7 million M2M connections shown in Figure 4.32), equivalent to 13% of all such connections. Businesses accounted for a higher proportion of all dedicated data subscriptions (16%) than of subscriptions including voice services (12%) in 2015, while more than three-quarters (77%) of businesses’ dedicated data subscriptions were M2M connections.

**Figure 4.32 Business mobile voice and dedicated mobile data connections**



Source: Ofcom / operators

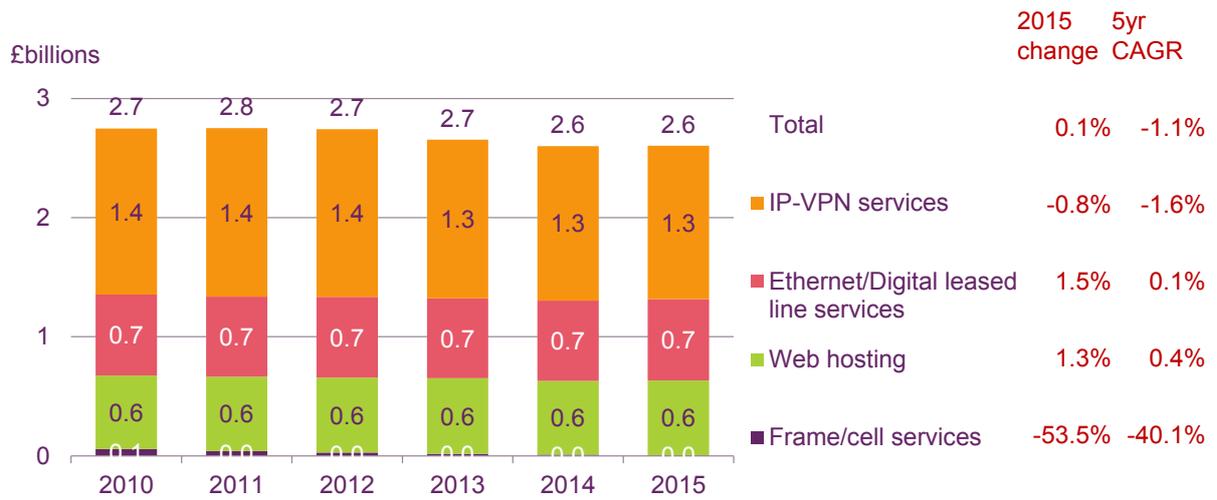
Note: Mobile broadband excludes smartphone data use.

**Corporate data services’ revenues remained broadly flat in 2015**

Data provided to Ofcom by IDC show that total UK corporate data services revenue (i.e. spend on services that connect business sites to each other, and web hosting) increased by 0.1% (£26.7m) to £2.6bn in 2015. This increase was partly due to increases in web hosting and Ethernet/digital leased-line services, of 1.3% and 1.5% respectively. A small percentage fall in IP-VPN services revenue (0.8%) offset most of the increases in other areas, as this service generates the most revenue of all the corporate data services. There was also a minor fall in frame/cell services revenue of £5.1m (53.5%) to £4.4m.

Revenues from these services are related to connectivity revenues only (i.e. they exclude revenues relating to managed services).

**Figure 4.33 Breakdown of corporate data services' revenues**



Source: IDC

## 4.3 The telecoms user

### 4.3.1 Introduction

In this section we look at the major consumer trends in the use of residential telecoms services during the five years to 2015. The analysis in this section is based on data provided by telecoms providers to Ofcom as part of its regular data collection programmes, Ofcom's consumer research, and data obtained from third-party suppliers.

The section is split into four main areas:

- Market overview: general trends in take-up and spend on fixed and mobile telephony services
- Fixed voice services: fixed voice usage trends and customer experience
- Fixed broadband services: developments in fixed broadband use and the customer experience
- Mobile voice and data services: mobile voice and data usage trends, price of voice services and customer experience, developments in mobile broadband services.

### 4.3.2 Overview

#### **The proportion of household spend on telecoms services remained stable at 3.5% in 2015**

Average UK household spend on telecoms services (which is calculated by dividing residential telecoms service revenues by the number of UK households) was £82.17 per month in 2015. This was a £2.52 per month (3.2%) increase compared to 2014, and represented 3.5% of the average total household spend in 2015, a similar proportion to that in 2013 and 2014.

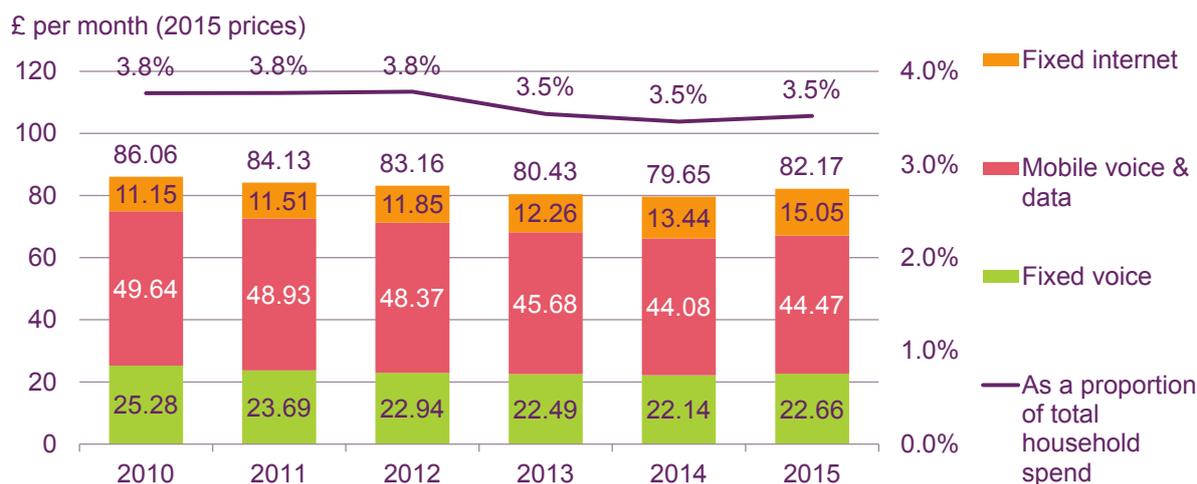
Most of the increase in average spend in 2015 was due to a £1.61 per month (12.0%) increase in average fixed internet spend, which was mainly due to consumers migrating to superfast broadband services. These services typically cost around £10 per month more than standard broadband services, and in the year to November 2015 the proportion of residential fixed broadband connections that had an advertised speed of 'up to' 30Mbit/s increased by nine percentage points to 42%.<sup>70</sup>

There were also smaller increases in average spend on fixed voice and mobile services during the year. Average household spend on fixed voice services increased by 52 pence per month (2.3%) to £22.66 in 2015. This was due to increasing prices (in particular line rental) and came despite a 1% fall in the number of residential fixed lines and a 10% decline in outgoing call volumes from these lines. Average spend on mobile voice and data services increased by 39 pence per month (0.9%) to £44.47 in 2015, mainly due to increasing use of mobile data services, including 4G.

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<sup>70</sup> Ofcom *UK Home broadband performance report*  
(<http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/nov2015/fixed-bb-speeds-nov15-report.pdf>)

**Figure 4.34 Average household spend on telecoms services**



Source: Ofcom / operators / ONS

Notes: Includes estimates where Ofcom does not receive data from operators; adjusted to CPI; includes VAT.

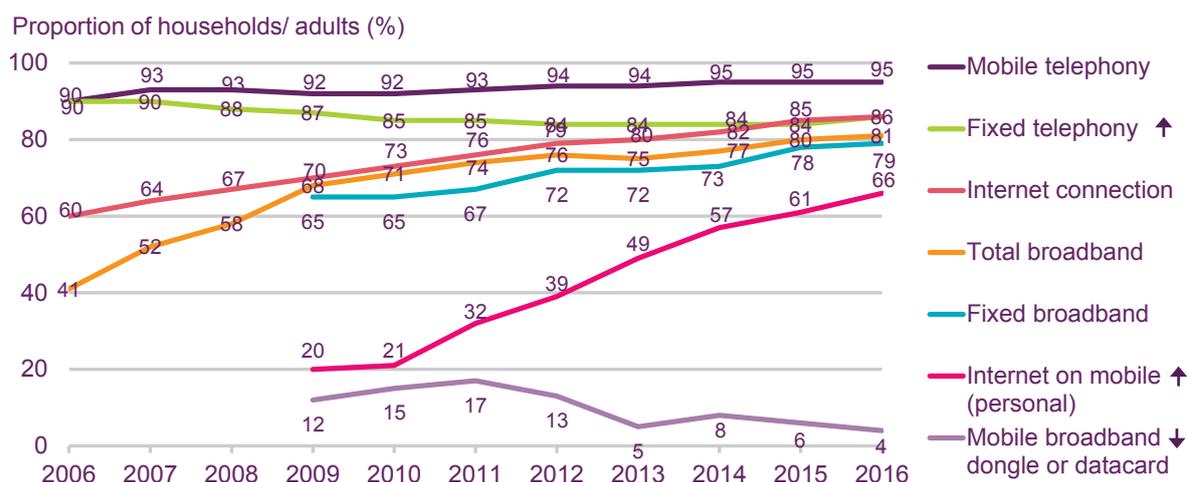
### The proportion of respondents with access to the internet on their mobile increased from 61% to 66% in 2016

As is shown in Figure 4.35 below, there were some statistically significant changes in the take-up of telecoms services in 2016.

Two of these are likely to be related to the increasing popularity of smartphones: there was a five percentage point increase (to 66%) in the proportion of respondents who used a mobile phone to access the internet and a two percentage point decline in the proportion of respondents with access the internet through a mobile broadband dongle or datacard. It is likely that some of the decline in the use of dedicated mobile data services is due to smartphone users choosing to access the internet on their mobile device, or to use the mobile data connection on their smartphone on another device (known as tethering) rather than paying for a separate dedicated mobile data service. More information on smartphone take-up can be found in section 5.2.2 of this report.

The only other significant change in 2016 was the proportion of respondents with access to a landline phone, which increased by two percentage points to 86%. This may be indicative of the increase in take-up of fixed broadband which, in most cases, requires a landline.

**Figure 4.35 Take-up of key telecoms technologies**



Source: Ofcom Technology Tracker. Data from Q1 of each year 2007-2014, then H1 2015-2016. Base: All adults aged 16+ (2016 n=3737). Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016. QC1: Is there a landline phone in your home that can be used to make and receive calls? QE1: Does your household have a PC or laptop computer? / QE2: Do you or does anyone in your household have access to the internet at home (via any device, e.g. PC, laptop, mobile phone etc.)? / QE9: Which of these methods does your household use to connect to the internet at home? Note: Use of internet on mobile is personal take-up measure, whereas the other data relate to household take-up.

**The average 4G download speed in 2015 was 17Mbit/s, almost three times faster than 3G (6Mbit/s)**

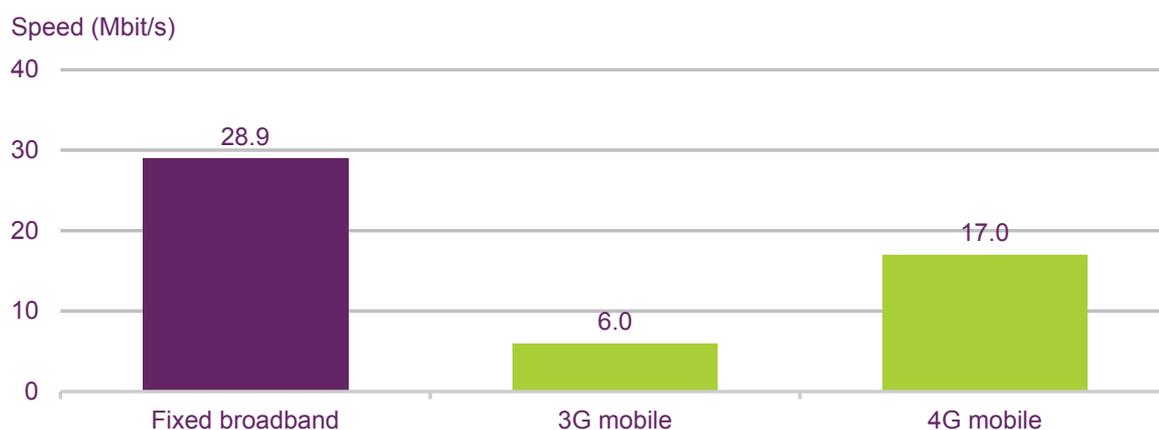
The average 4G download speed across the five cities measured in Ofcom’s *Smartphone Cities* research in 2015<sup>71</sup> (Cardiff, Edinburgh, Liverpool, London and Norwich) was 17.0Mbit/s. This was almost three times the average over 3G (6.0Mbit/s). London had the slowest average 4G download speed across all operators, across the five cities (12Mbit/s), while the highest average speed among the cities included in the research was in Norwich and Edinburgh, at 16Mbit/s for both.

By way of comparison, the average UK fixed broadband download speed was 28.9Mbit/s in November 2015, up from 22.8Mbit/s in November 2014.<sup>72</sup>

<sup>71</sup> [http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/smartphone-cities/smartphone\\_cities.pdf](http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/smartphone-cities/smartphone_cities.pdf)

<sup>72</sup> <http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/UK-home-broadband-performance-Nov-15/>

**Figure 4.36 Average actual fixed and mobile data speeds: 2015**



Source Ofcom: *UK fixed-line broadband performance, November 2015* (<http://stakeholders.ofcom.org.uk/market-data-research/other/telecoms-research/broadband-speeds/UK-home-broadband-performance-Nov-15/>) and *Smartphone Cities, fieldwork in November and December 2015* (<http://stakeholders.ofcom.org.uk/binaries/research/broadband-research/smartphone-cities/chartpack.pdf>)

### Use of non-traditional communications services increased in 2016

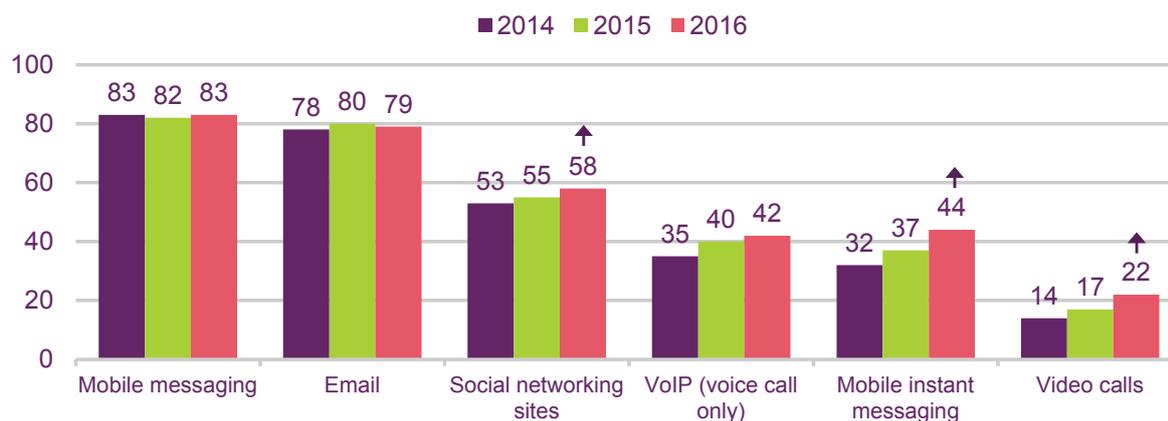
According to Ofcom research, more than four in five adults (83%) used traditional mobile messaging services (SMS and MMS) in 2016, with email the second most frequently used service, at 79%.<sup>73</sup> Three in five people (58%) said they were users of social networking sites; an increase of three percentage points compared to Q1 2015.

Significant changes emerged in the use of mobile instant messaging services (e.g. WhatsApp and Facebook Messenger), up by seven percentage points to 44%, and video calls (e.g. Skype or Apple Facetime), up by five percentage points to 22%. The drivers behind the increased use of non-traditional communication services are likely to be the wider choice of platforms and services, the ability to send text, pictures, videos and voice recordings within one application, and the increasing take-up of smartphones and tablets.

<sup>73</sup> Differences between Technology Tracker data and that of Ofcom's Digital Day research is due to differences in the survey methodology, such as collection methodology and measurement period length.

**Figure 4.37 Use of methods of communication other than traditional voice telephony**

Proportion of respondents (%)



Source: Ofcom Technology Tracker. Data from Q1 2014, then H1 2015-2016

Base: All adults 16+ (2016=3737)

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QD28A: Which, if any, of the following activities, other than making and receiving voice calls, do you use your mobile for? / QE5A: Which, if any, of these do you use the internet for? / QE30: Have you or anyone in your household ever used one of these services to make voice calls using the internet at home? (answers used relate to current use)

### 4.3.3 Fixed voice services

#### Consumer satisfaction with fixed voice services remains high (88%) with 6% stating they are dissatisfied

Around nine in ten (88%) residential fixed voice users were either 'very' or 'fairly' satisfied with their service in 2016, in line with figures recorded over recent years. Six per cent of respondents with fixed voice services said that they were neither satisfied nor dissatisfied with the overall service, while 4% were fairly dissatisfied and 2% were very dissatisfied. Some potential drivers of dissatisfaction include noise on the line, faults and poor customer service.

**Figure 4.38 Overall satisfaction with residential fixed voice services**



Source: Ofcom Technology Tracker. Data from Q1 2011-2014, then H1 2015-2016

Note: Shows the proportion of users with each service, includes only those who expressed an opinion.

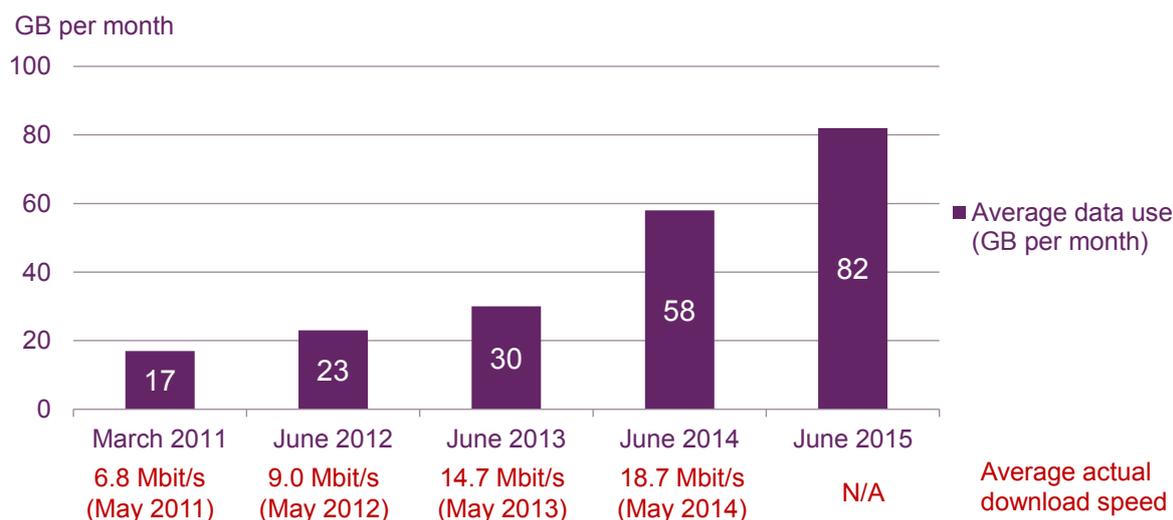
Thinking about your home phone service only, please use this card to say how satisfied you are with the overall service provided by (main supplier)?

#### 4.3.4 Fixed data services

##### Average fixed broadband data use increases as more consumers take up superfast services

In 2015, the average fixed broadband line used 82GB of data per month. This represents a 41% increase compared to the 58GB per month recorded in June 2014. This growth in use is partly due to the growing popularity of data-heavy video-on-demand services, such as BBC iPlayer, Netflix and Amazon Prime Instant Video, as well as faster connection speeds which allow more members of a household to be online simultaneously. As our Digital Day research showed, average time spent watching paid on-demand TV services grew by 19 minutes in 2016 versus 2014 to 1hr 2m a day on average among users of these services, while the weekly reach of paid on-demand TV services increased by 8pp to 26% over the same time period.

**Figure 4.39 Average fixed broadband data use per month**



Source: Ofcom Infrastructure Reports 2011-2015, Connected Nations report 2015, Fixed-line broadband performance report 2011-2014.

Note: No speed data were available for May 2015.

### Satisfaction with fixed broadband was unchanged

The number of respondents claiming to be 'very' or 'fairly' satisfied with their overall fixed broadband services remained mostly stable in 2016, at 87%. The proportion of fixed broadband users who said they were 'very' or 'fairly' satisfied with the speed of their fixed broadband service also remained stable during this period (82%). However, there has been an increase in the number of respondents who are 'fairly' satisfied with the speed of their fixed broadband service (up by 4% compared to Q1 2015). Dissatisfaction with the overall service was 7% overall, with 5% of respondents fairly dissatisfied and 3% very dissatisfied. Dissatisfaction with the speed of the service was 11% overall, with 6% fairly and 5% very dissatisfied.

**Figure 4.40 Satisfaction with aspects of fixed broadband service**



Source: Ofcom Technology Tracker. Data from Q1 2009-2014, then H1 2015-2016

Base: All adults aged 16+ with a fixed broadband connection (2016=2774)

Note: Includes only those who expressed an opinion.

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QE8A/B: Thinking about your fixed broadband internet service, please use this card to say how satisfied you are with your main supplier for... The overall service/ The speed of your service while online (not just the connection) provided by [main provider]?

There were a number of respondents that chose 'neither', they have been excluded from the chart

### 4.3.5 Mobile voice and data services

#### After a period of decline, average monthly outgoing mobile call minutes increased in 2015

On average, post-pay customers made 219 minutes of outgoing calls per month in 2015, around four times the average for pre-pay customers (55 minutes). After a period of decline, average monthly outbound mobile call minutes slightly increased for both pre-pay and post-pay customers, up by 2.0% and 0.7% respectively. The overall monthly average (including both post-pay and pre-pay) increased by four minutes (2.9%) to 151 outbound call minutes in 2015.

Average pre-pay and post-pay outgoing minutes were both lower than in 2010 (decreasing by 10.8% and 13.3% respectively), although the overall monthly average increased by 5.7% (8 minutes per month) over the same period. This is mainly due to the greater proportion of consumers moving to post-pay packages over the period, which typically have higher average call use as a result of the availability of inclusive call bundles.

**Figure 4.41 Average monthly outbound mobile call minutes, by subscription type<sup>74</sup>**



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators.

### Average monthly mobile messages continued to fall in 2015

Average monthly outbound mobile messages decreased for both pre-pay and post-pay customers in 2015. On average, post-pay customers sent 150 mobile messages (including SMS and MMS) per month during the year, over three times the average number for pre-pay customers (46 messages per month). While there was a decrease in the average number of messages sent by post-pay subscribers (down by 12.5%), pre-pay customers sent 2.0% more messages than in the previous year.

**Figure 4.42 Average monthly outbound mobile messages per subscriber, by subscription type**



Source: Ofcom / operators

Note: Includes estimates where Ofcom does not receive data from operators.

### Overall satisfaction with mobile services remained fairly stable in 2016

Overall satisfaction levels with mobile services remained stable in 2016, with 91% of mobile users saying that they were 'very' or 'fairly' satisfied with their mobile service. Compared to a

<sup>74</sup> Blended average is the total average including both pre-pay and post-pay calls.

year previously, more respondents said they were 'fairly' satisfied (rather than 'very'). Satisfaction with accessing the network was similar to overall satisfaction, at 87%, in line with the figure recorded the previous year. Overall dissatisfaction figures were 4%, with 2% of respondents both 'fairly' and 'very' dissatisfied. In terms of accessing the network, 4% of respondents were 'fairly' dissatisfied and 3% 'very'.

**Figure 4.43 Satisfaction with aspects of mobile service**



Source: Ofcom Technology Tracker. Data from Q1 2009-2014, then H1 2015-2016

Base: All adults aged 16+ with a mobile phone (2016=3425)

Note: Includes only those who expressed an opinion.

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QD21A/J: Thinking about your mobile phone service, please use this card to say how satisfied you are with your main supplier for... The overall service/ Reception/ accessing network provided by [main provider]?

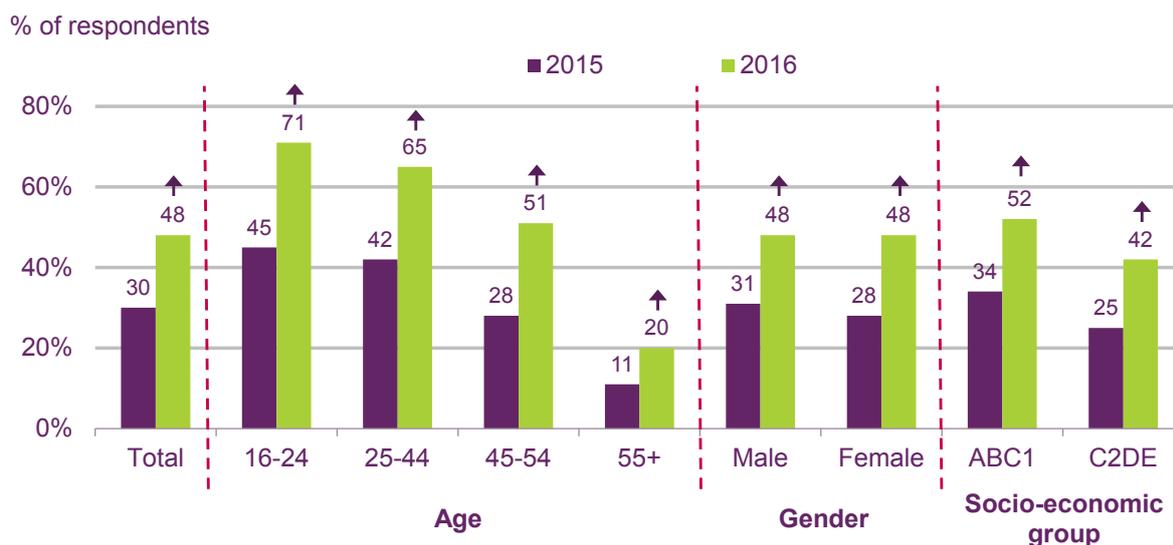
A number of respondents chose 'neither'; they have been excluded from the chart

#### 4G take-up significantly increased across all ages, genders and socio-economic groups in 2016

Consumer research conducted by Ofcom in 2016 shows that 48% of adults (16+) had a 4G mobile service. Take-up was higher for those 16-24s (71%) and 25-44s (65%). The 55+ age group had lower take-up, at 20%. Take-up between males and females was equal at 48%. There was 52% take-up in the ABC1 socio-economic group compared to 42% in the C2DE group.

The largest increase between 2015 and 2016 was among 16-24s: a 26 percentage point year-on-year increase. The lowest increase was in the over-55 group, with a nine percentage point increase over the year. The increased take-up of 4G services across all demographics was probably due to consumers wanting to use services such as video streaming, which require faster speeds, as well as the increased availability of 4G services, as it increasingly becomes a standard service instead of the premium option. Some operators are also beginning to offer tariffs that offer 4G exclusively, which will lead to increases in take-up.

**Figure 4.44 4G take-up overall, by age, gender and socio-economic group**



Source: Ofcom Technology Tracker. Data from H1 2015-2016

Base: UK adults 16+ 2016 (3737), 16-24 (519), 25-44 (1206), 44-54 (570), 55+ (1442), male (1790), female (1947), ABC1 (1919), C2DE (1813)

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016, between each age group in 2015 and 2016 and between each socio-economic group in 2015 and 2016.

QD41: Do you have a 4G service?

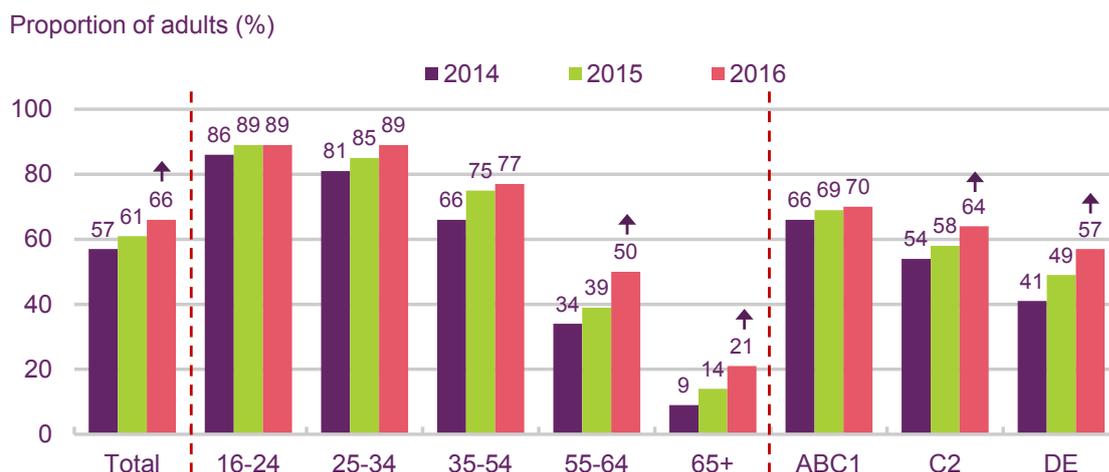
A number of respondents chose 'neither'; they have been excluded from the chart

### Two-thirds of adults used mobile data services in 2016

Ofcom research shows that 66% of adults claimed to use data services on a mobile phone in 2016, a five percentage point increase on the previous year. The younger age groups were the most likely to be doing this: 89% of 16-24s and 25-34s accessed data services on a mobile handset. However, the only significant increase since 2015 in people accessing data services on a mobile phone was among the older age group (55-64 and 65+).

The proportion of data users was higher among more affluent socio-economic groups (70% of ABC1s), although there has been a significant increase in the C2 and DE groups. The main driver of increasing internet use on mobile handsets is the growth in smartphone take-up.

**Figure 4.45 Use of data services on mobile phones, by age and socio-economic group**



Source: Ofcom Technology Tracker. Data from Q1 2014, then H1 2015-2016

Base: All adults aged 16+ (2016 n=3737)

Note: Internet use includes accessing the internet, downloading and streaming content, connecting using Wi-Fi and using VoIP.

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016, between each age group in 2015 and 2016 and between each socio-economic group in 2015 and 2016.

QD28A: Which if any, of the following activities, other than making and receiving voice calls, do you use your mobile for?

### Six in ten mobile users browsed the internet on their mobile in 2016, up five percentage points from 2015

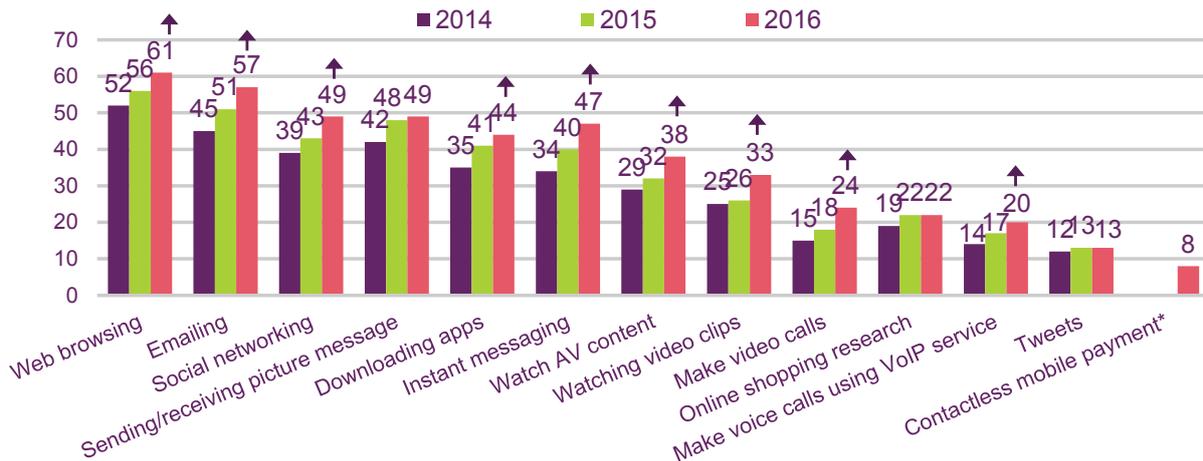
Ofcom research shows that there was an increase in the proportions of mobile users who used various mobile data services (including web browsing, email services, social networking, downloading apps, instant messaging and watching AV content and video clips) in the year to 2016. The driver of these increases is the likely to be the growth in smartphone take-up

Six in ten mobile users (61%) said that they browsed the internet on their mobile phone in 2016, a five percentage point increase on 2015; over half of mobile users (57%) sent or received email; and just under half (49%) used social networking sites/apps.

The proportions of mobile users who accessed email and social networks, and watched AV content, all increased by six percentage points since 2015, while the proportion of those using instant messaging and watching video clips increased by seven percentage points. The increase in the proportion of mobile users who downloaded apps slowed in 2016 (up by three percentage points, compared to a 6pp increase in 2015).

**Figure 4.46 Use of mobile data services among mobile users**

Proportion of mobile users using service (%)



Source: Ofcom Technology Tracker. Data from Q1 2014, then H1 2015-2016

Base: All mobile users aged 16+ (2016 = 3425)

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QD28A: Which if any of the following activities, other than making and receiving voice calls, do you use your mobile for?

\* New code for 2016





# The Communications Market 2016

## **5 Internet and online content**

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# 5.1 Key market developments in internet and online content

## 5.1.1 Sector overview

Almost nine in ten (86%) of UK adults now have internet access at home, and this is highest among those aged under 55. The UK is becoming increasingly connected via the smartphone; research suggests that it is the most widely-used device by UK adults for accessing the internet. Since 2015, the number of UK adults owning a smartphone has increased to 71%, overtaking laptops (64%). Ownership is highest among younger adults, at more than nine in ten under-34s.

2015 was the first year in which the smartphone was considered to be the most important device for accessing the internet among all adults, overtaking the laptop. Consistent with high take-up, UK adults continued to consider the smartphone their most important device for internet access in 2016; more than a third (36%) of UK internet users agreed with this. UK adults aged under 55 were the most likely to consider the smartphone as their most important device for internet access, particularly the 16-34s. In contrast, over-55s were more likely to consider the laptop their most important device for internet access.

The wide availability and use of smartphones, and of mobile devices more generally, reflects the increased connectivity of the UK. As a result of a more connected and converged landscape, people can use their devices for a wide range of services and activities. Retail is one such example; in March 2016, more internet users visited online retailers on mobile devices than on laptops and desktops. Mobile devices can also be used for financial services; in March 2016, nearly a third (30%) of mobile internet users used their device to access their bank accounts, and 20% used their device to pay/transfer money electronically.

Convergence has also contributed to the popularity of social media, a notable feature of the UK's connected landscape. Social media sites such as Facebook provide a place for people to network, message and share multi-media content (like videos and pictures). Social media is a popular activity, particularly among young adults: our *Digital Day 2016* study shows that 99% of 16-24s use social media<sup>75</sup> at least weekly in 2016. With the exception of the over-65s, the majority of people use social media at least weekly. The mobile phone is the most popular device for social media use in 2016: 50% of all adults' time using social media is spent on a mobile phone. Adults aged under 45 spend most of their social media time on a mobile phone, while over-45s spend more of their social media time on a computer than on any other device.

The popularity of using mobile devices for online activities is reflected in the increased expenditure in mobile advertising. Total mobile advertising expenditure grew by 60.3% year on year, to £2.6bn, in 2015. Mobile search advertising spend grew by 63.6% to £1.3bn, with mobile display advertising spend up by 58.8% to £1.3bn. Total UK expenditure on internet advertising increased by 16.4% year on year, to £8.6bn in 2015. The increased spend in mobile advertising is likely to be one of the drivers behind this growth (along with increased spend in online video and the increased use of digital advertising among press brands).

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<sup>75</sup> Social media is defined as activity through Facebook, Twitter, LinkedIn, Instagram, YouTube, or any 'other social media site'. Each time a respondent recorded having done certain activities in their diary, they were asked if it was through any of these services.

**Figure 5.1 UK internet and online content market: key statistics**

| UK internet and online content market   | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|------|------|------|------|------|------|------|------|
| <sup>1</sup> Internet take-up (%)   | 73   | 75   | 77   | 79   | 80   | 82   | 85   | 86   |
| <sup>1</sup> Laptop take-up (%)   | 44   | 51   | 55   | 61   | 62   | 63   | 65   | 64   |
| <sup>1</sup> Smartphone take-up (%)   | n/a  | n/a  | 27   | 39   | 51   | 61   | 66   | 71   |
| <sup>1</sup> Tablet take-up (%)   | n/a  | n/a  | 2    | 11   | 24   | 44   | 54   | 59   |
| <sup>1</sup> Consideration that the smartphone is the most important device for internet access (%) | n/a  | n/a  | n/a  | n/a  | 15   | 23   | 33   | 36   |
| <sup>2</sup> Total digital audience (million)   | n/a  | n/a  | n/a  | n/a  | n/a  | n/a  | 47.5 | 50.3 |
| <sup>3</sup> Digital advertising expenditure (£bn)  | 3.6  | 4.1  | 4.8  | 5.4  | 6.3  | 7.3  | 8.6  | n/a  |
| <sup>3</sup> Mobile advertising expenditure (£m)  | 38   | 83   | 203  | 529  | 1021 | 1631 | 2627 | n/a  |

Source:<sup>1</sup>Ofcom consumer research,<sup>2</sup> comScore MMX Multi-Platform, UK, data taken for March 2015 and March 2016; <sup>3</sup>IAB/PwC Digital Adspend

Note: With the exception of internet, and internet on mobile phone, take-up data, all data relate to the calendar year, so 2016 data are currently unavailable.

Note: Caution is advised in comparing values before and after February 2011 because of a change in comScore methodology.

In this chapter of the Communications Market Report we examine developments in internet and online content. Reflecting the reality of convergence, we discuss aspects of some of these developments in more detail in other sections of this document, in particular those relating to audio-visual content and audio content.

This chapter focuses on three core areas:

- Section 5.1.2: this section examines changes in the use of social media. The section primarily draws upon findings from Ofcom's 2016 Digital Day study.
- Section 1.1: this section considers internet access. We examine the proportion of adults who have internet access, the devices they use to access the internet and the main activities people use the internet for. We also consider those who do not use the internet at all, and their reasons for not having an internet connection.
- Section 1.1: this section provides an overview of consumption of online content. We examine the most popular online services, websites and apps. We look at consumer behaviour unique to the internet, such as online video, video gaming, retail, mobile payments and online news. Finally, we look at changes in advertising revenues.

### 5.1.2 Use of social media in the UK

Social media can be understood as websites and/or applications that enable users to create or share content, and to participate in social networking. Social media platforms now integrate and combine different types of services and functionalities (such as messaging, social networking and online video) that have historically been limited to discrete websites or apps.

This section is dedicated to examining social media in the light of the findings of Ofcom's 2016 Digital Day study – a diary-based research study that aims to understand how people interact with communications on a day-to-day basis. The section also uses data provided by

comScore,<sup>76</sup> which gives an indication as to the most commonly-used social media networks.

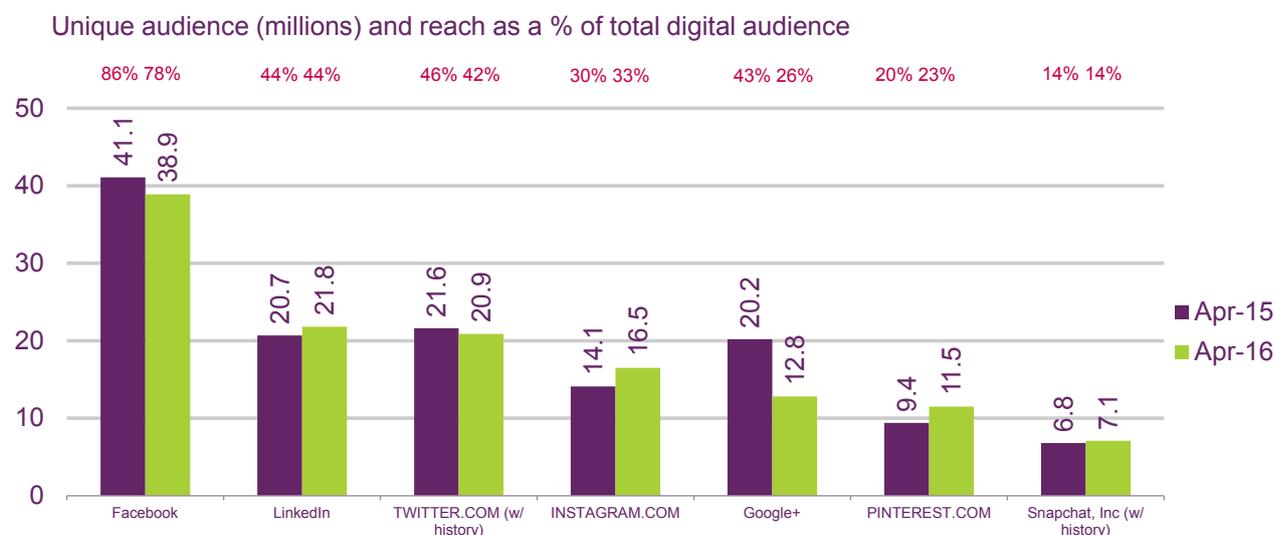
### Facebook attracted the largest digital audience, of the selected comparator social networking sites, in April 2016

Here, we use comScore to look at the total number of measured unique users for a number of social networking services in April 2016.<sup>77</sup>

Facebook continues to be the largest social network service in the UK. In April 2016, it attracted a digital audience of 38.9 million (more than three-quarters of active internet users). This was larger than that of LinkedIn (21.8 million) and Twitter (20.9 million).

The unique audiences for LinkedIn, Instagram, Pinterest and Snapchat have grown since 2015. However, the unique audience for some social networking sites has declined; the unique audience for Google+ has fallen year on year, down by 7.4 million to 12.8 million as of April 2016. The unique audiences of Facebook and Twitter have also fallen.

**Figure 5.2 Digital audience of selected social networking services: April 2015 and April 2016**



Source: comScore MMX Multi-Platform, UK, April 2015 and April 2016

Note: Entities cited from comScore MMX Multi-Platform: [P] Facebook, [P] LinkedIn, [M] Twitter (w/ history), [M] INSTAGRAM.COM, [C] Google+, [P] PINTEREST.COM. MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams and mobile use. Mobile use includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data.

### Facebook Messenger attracted the largest number of mobile users in April 2016

In recent years, the network infrastructure has become much more developed, enabling superfast broadband and 4G technology. As a result, the infrastructure can now support more advanced forms of communication. A variety of mobile apps are available in the market which allow people to communicate in a range of different media formats (such as picture, video and audio), in addition to conventional text. Given their diverse functionalities, such as

<sup>76</sup> See section 5.3.1 for an overview of comScore and its products.

<sup>77</sup> The digital audience of social networking sites includes those who may have been browsing the site but do not actually use the site, or have an account for that site.

the ability to set up group chats and to send and receive data, some mobile messaging apps can be seen as a substitute for traditional telecoms services.

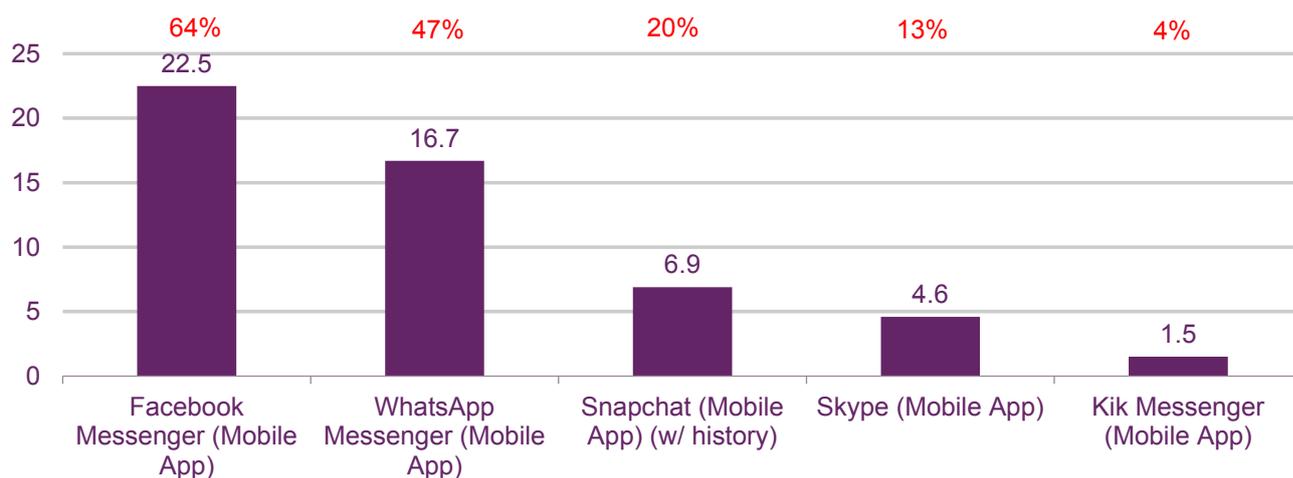
Our research indicates that instant messaging services are already being used instead of other, older methods of communication. Ofcom's 2016 Digital Day research shows that the proportion of people using instant messaging services has grown from 28% in 2014 to 43% in 2016, and that 21% of people are using photo or video messaging services, up from 14% in 2014. Over the same period, the proportion of people emailing has fallen by 7pp to 70%, and the proportion of people texting has fallen by 8pp to 63%.

Looking at data from comScore on the unique audiences of mobile users for selected mobile messaging apps, Facebook Messenger attracted the largest number of mobile users in April 2016, with a unique audience of 22.5 million (a reach of 64% across the UK mobile population). WhatsApp<sup>78</sup> attracted the second highest number of mobile users, with 16.7 million unique visitors and a reach of 47% across the UK mobile population. Of all the selected comparator mobile messaging apps, Kik Messenger attracted the lowest number of mobile users.

Use of all mobile messaging apps in April 2016 was highest among the younger age groups. More than eight in ten (81%) of the mobile audience aged 18-24, and 75% of those aged 25-34 (compared with 45% of over-55s) used Facebook Messenger in April 2016. Use of WhatsApp was broadly similar among the 18-24s and the 25-34s (60% and 63% respectively). However, a greater age disparity was seen in the use of Snapchat; this was particularly high among 18-24s (61%, compared to 25% of 25-34s).

**Figure 5.3 Mobile audience of selected mobile messaging apps: April 2016**

Unique audience (millions) and reach as % total mobile audience



Source: comScore Mobile Metrix, UK, April 2016

Note: Mobile use includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data. comScore entities used were: [S] Facebook Messenger (Mobile App), [C] WhatsApp Messenger (Mobile app), [M] Snapchat (Mobile App) (w/history), [S] Skype (Mobile App), [M] Kik Messenger (Mobile App)

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

<sup>78</sup> WhatsApp was acquired by Facebook in February 2014.

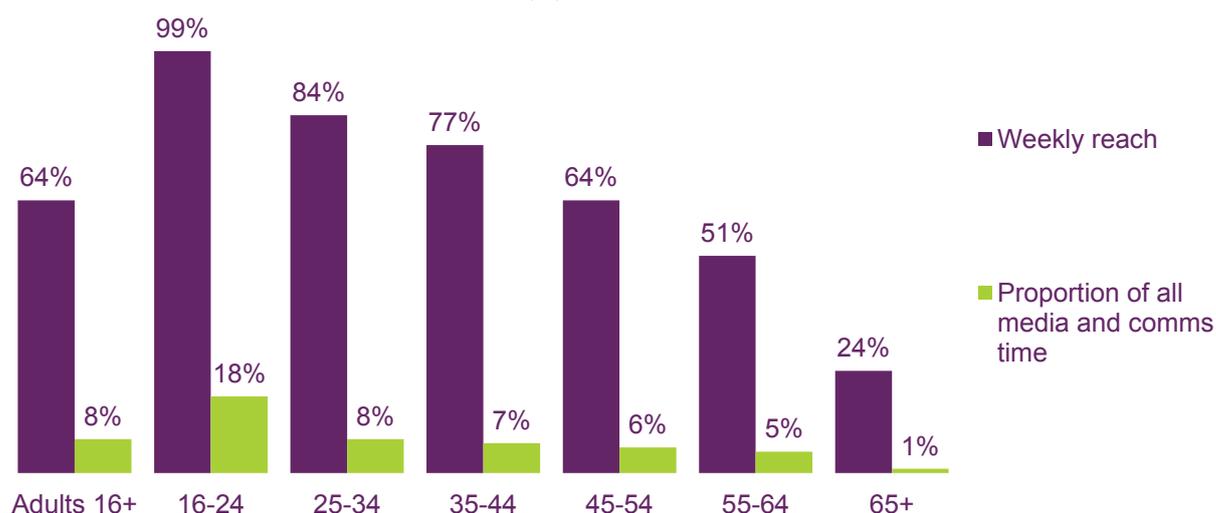
## Use of social media was near-universal among 16-24 year olds in 2016

More than six in ten (64%) UK adults claimed to use social media<sup>79</sup> in 2016, and its use accounted for 8% of all time spent on media and communications. Weekly reach of social media varies markedly by age; those aged 16-24 are by far the most prevalent users. Social media had a near-universal reach among this age group, with 99% claiming to use it. For the 16-24s, social media accounted for 18% of all time spent using media and communications – a much greater proportion than for all adults (8%). On average, 16-24s spent 2 hours 26 minutes per day using social media in 2016 - noticeably higher than the average time spent by all adults (1 hour 16 minutes).

Use of social media declines with age: the lowest use is among over-65s. Twenty-four per cent of this group claimed to use social media in 2016; their use of such services made up 1% of their total time spent using media and communications.

**Figure 5.4 Social media use, by age group**

Reach and proportion of time spent on social media (%)



Source: Ofcom Digital Day 2016

Adult diary: Chart shows the proportion of adults who recorded communicating through a social networking site (D) or using a social media site for certain types of media activity (E2) across their diary week. Proportion of media and comms time is calculated from the durations of these activities (B2).

Base: Adults aged 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

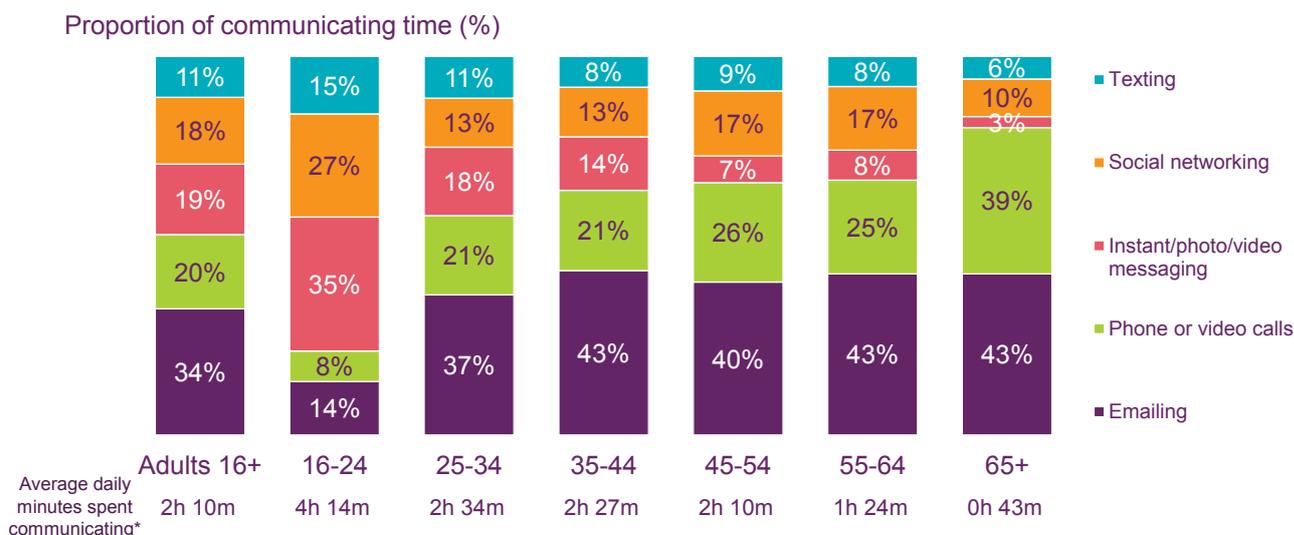
## Those aged 16-24 spent a large proportion of their communication time on social networking, and less time on email and phone calls, than the older age groups

The 16-24s spent a larger proportion of their time than the older age groups communicating via social networking: 27% for 16-24s vs. 18% among UK adults as a whole. In line with this,

<sup>79</sup> Digital Day 2016 defines social media as communicating (excluding checking updates) and consuming media (including short video clips on e.g. YouTube, news sites; streamed online music; music videos; games; sports news/updates; other websites or apps; other activities). Sites include: Facebook, Twitter, LinkedIn, Instagram, YouTube and/or other social media site.

16-24s spend less time than older age groups communicating via phone or video calls (8% vs. 20% for the UK average) and emailing (14% vs. 35% for the UK average).

**Figure 5.5 Proportion of time spent communicating attributed to activities, by age group**



Source: Ofcom Digital Day 2016

Adult diary: Chart shows the proportion of all communication time (B2) attributed to each activity (D) by age group.

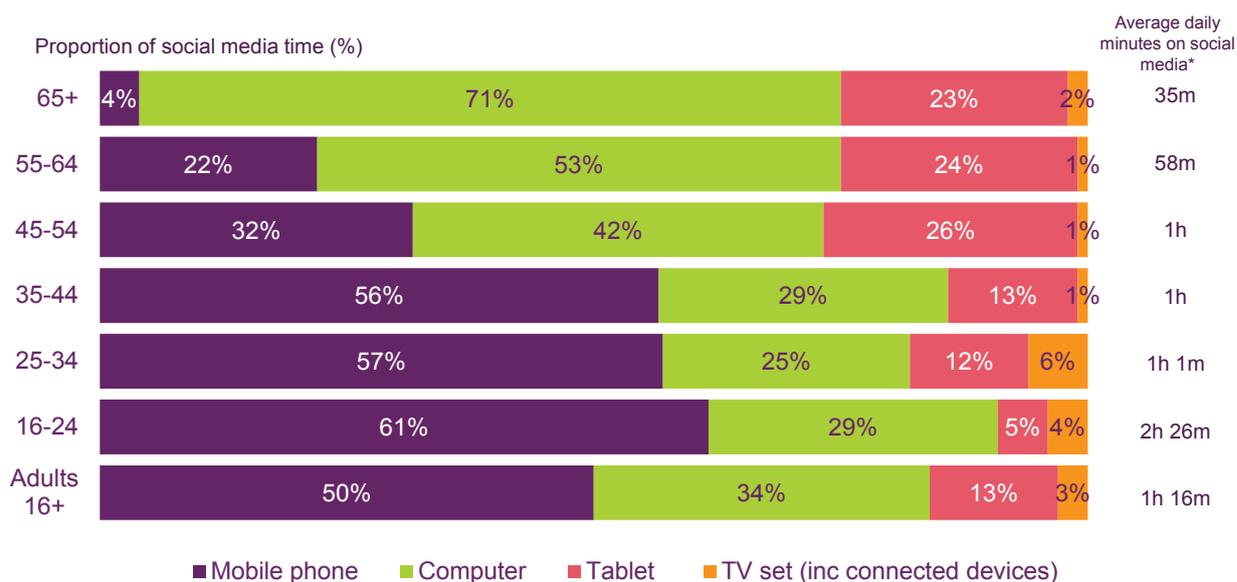
Base: Adults aged 16+ (1512), 16-24 (129), 25-34 (189), 35-44 (282), 45-54 (299), 55-64 (259), 65+ (354)

### Half of all adults' social media time was spent using social media on a mobile phone

The mobile phone is the most popular device for using social media, among adults who used any social media during their diary week. Of the total time spent by all adults on this activity in 2016, 50% of it was on mobile phones. Just over a third (34%) of all adults' social media time was spent on a computer, and 13% using a tablet.

There is a clear divergence between younger and older adults in the devices they use for social media. Mobile phones were the most widely-used device for social media among all under-45s, and highest of all among 16-24s, accounting for 61% of their total time using social media. In contrast, over-45s were more likely to use computers and tablets for social media. Over-65s were more likely to use a computer; 71% of their social media time was spent on this device.

**Figure 5.6 Proportion of social media time attributed to devices, by age group**



Source: Ofcom Digital Day 2016

Adult diary: Chart shows the proportion of all social media time (B2) attributed to each activity by age group.

\*The average daily minutes figure is among those who used social media at all across their diary week on any device (sum figure)

Base: Adults aged 16+ who used any social media during their diary week (991)

### Adults spent almost half of their social media time communicating through a social networking site in 2016

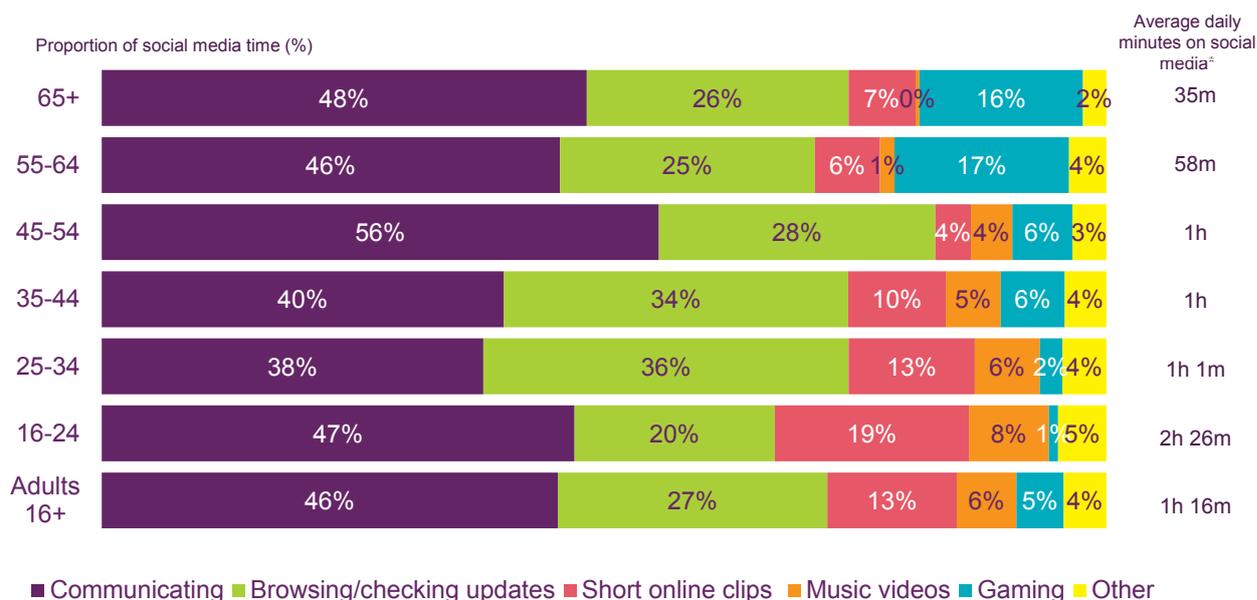
In 2016, UK adults spent nearly half (46%) of their social media time communicating on a social networking site.<sup>80</sup> More than a quarter (27%) of their social media time was spent browsing/ checking updates, and 13% was attributed to watching short video clips. However, there was variation across the age groups in how they spent their social media time on other activities.

Social media can also be used for playing games. Those who play games on social media can share their progress in the game with their friends, and invite them to play. Many games are available free of charge, with some offering optional features for purchase. Time spent using social media for gaming increases with age, with the over-55s spending a greater proportion of their social media time on this activity than younger people. This contrast is highlighted at either end of the age range: the over-65s spent 16% of their social media time playing games, compared to just 1% spent by 16-24s.

In contrast, use of social media time for content-related activities decreases with age: 19% of 16-24s' social media time was spent watching short online clips, compared to 7% of the over-65s' time. The younger age groups also attributed more of their social media time to music videos than adults aged 65 and over.

<sup>80</sup> This includes activities such as commenting on statuses or posts, and sending messages (via browser or app), but excludes checking updates.

**Figure 5.7 Proportion of social media time attributed to activities, by age group**



Source: Ofcom Digital Day 2016

Base: Adults aged 16+ who used any social media during their diary week (991)

Adult diary: Chart shows the proportion of all social media time (B2) attributed to each activity, by age group.

\*The average daily minutes figure is among those who used social media at all across their diary week (net figure)

Note: 'Other' consists of streamed music, sports/news updates and other online news

### Nearly a third of mobile internet users posted photos on social media in April 2016

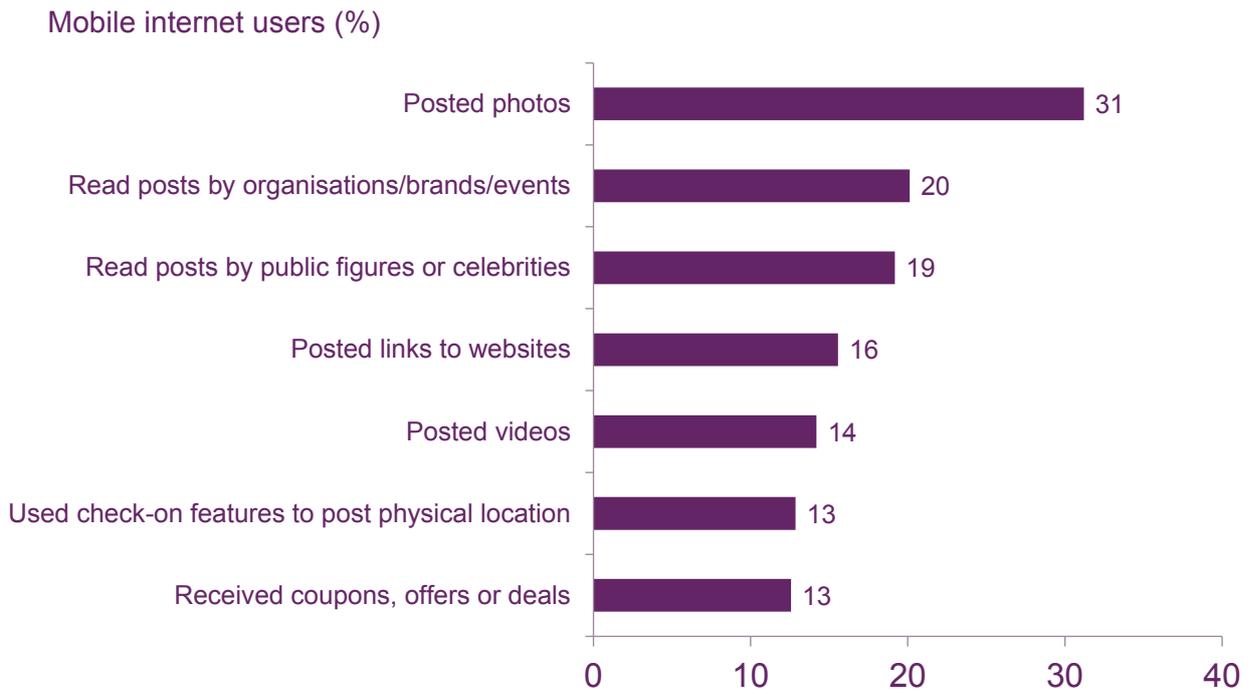
As seen in Figure 5.6, adults who used social media spent half of their social media time on a mobile phone. To understand the most popular types of social media behaviour among mobile phone users, we used data from comScore's MobiLens Plus product.<sup>81</sup>

Among those who accessed the internet using a mobile phone, nearly a third had posted photos on social media in April 2016. Other forms of generating and sharing content were less popular; 16% of mobile internet users posted links to websites and 14% posted videos.

A fifth of mobile internet users had read posts by organisations/ brands/ events, and nearly as many (19%) had read posts by public figures or celebrities on social media. Check-in features, which enable users to post their physical location, had been used by 13% of mobile internet users in April 2016.

<sup>81</sup> See 5.3.1 for an explanation of MobiLens Plus.

**Figure 5.8 Selected social media behaviour among mobile internet users: April 2016**



Source: comScore MobiLens Plus, UK three month averages ending April 2016  
Base: Mobile internet users 13+



## 5.2 Internet and devices

### 5.2.1 Introduction

In this section we consider internet access as a whole, as well as the take-up of internet-enabled devices.

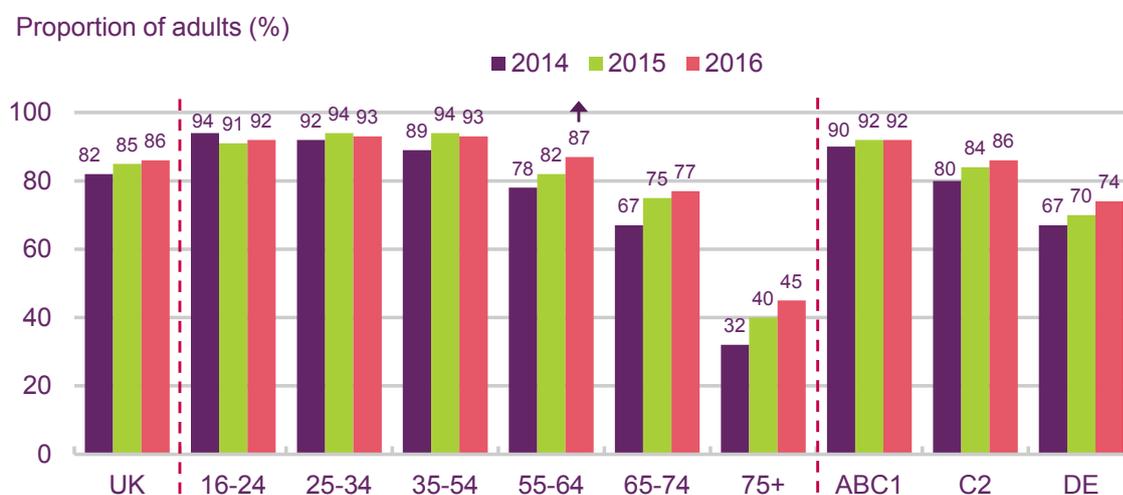
### 5.2.2 Take-up and use of internet-enabled devices

#### Almost nine in ten UK adults had home internet access in 2016

In 2016, 86% of UK adults claimed to have internet access at home, via any device. Take-up of internet access varies by age: more than 90% of adults aged under 55 claimed to have internet access at home (broadly in line with previous years), although among those aged 55-64, access had increased by 5pp (to 87%) since 2015. Those aged 75 and over had the lowest incidence of internet access; less than half (45%) claimed to have it.

It seems that more adults are using their mobile phones to access the internet at home: while the proportion of households with fixed broadband remained stable between 2015 and 2016 (at 78% and 79% respectively), the proportion of adults using a smartphone to access the internet at home has increased from 61% to 66%.

**Figure 5.9** Proportion of adults with home internet access



Source: Ofcom Technology Tracker, H1 2016

Base: All adults aged 16+ (n=3737)

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016, between each age group in 2015 and 2016 and between each socio-economic group in 2015 and 2016.

QE2: Do you or does anyone in your household have access to the internet at home (via any device, e.g. PC, laptop, mobile phone etc.)?

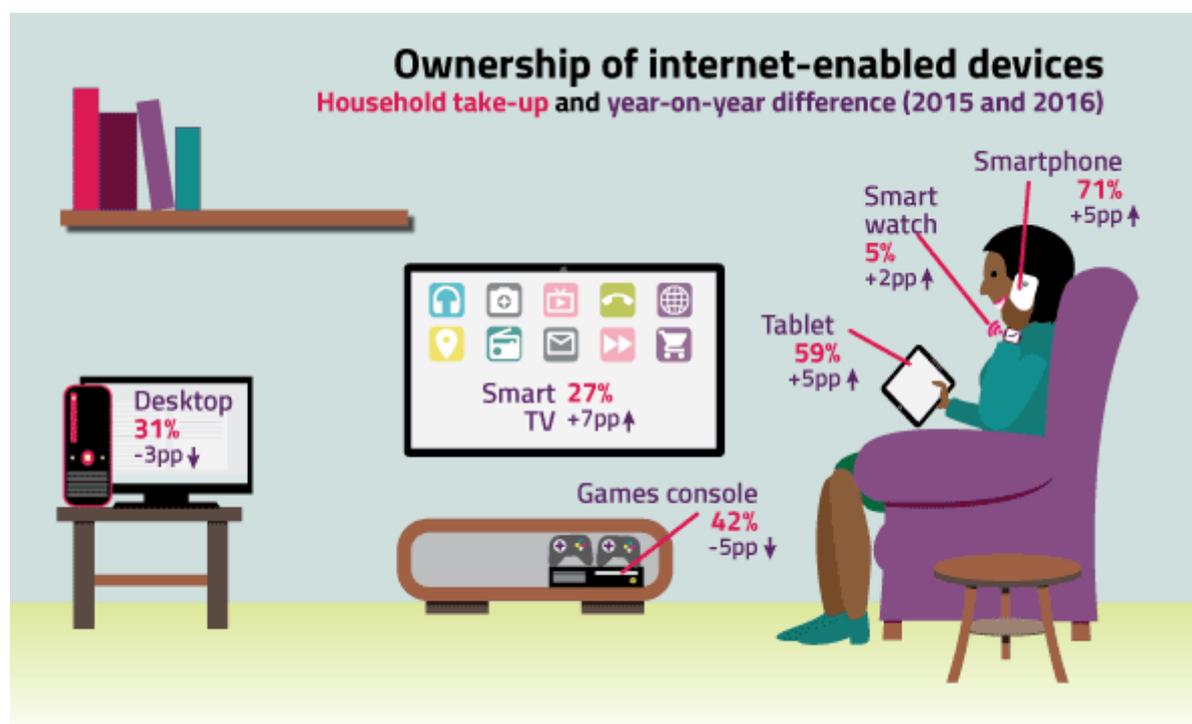
#### Smartphones are the most widely-owned internet-enabled device among UK households

The ownership of smartphones has increased since 2015. In 2016, 71% of UK households claimed to own a smartphone, up 5pp year on year. Laptops were the second most commonly-owned device among households, at 64%, followed by tablets, at 59%, up 5pp year on year.

The largest increase in take-up was of smart TVs; ownership increased by 7pp in the year to 2016, to 27% of households. Household ownership of games consoles and desktops fell between 2015 and 2016 to 42% (down by 5pp) and to 31% (down by 3pp) respectively. The decline in desktop ownership could be due to the increase in tablet ownership among households.

Since their inclusion in the study in 2015, ownership of smart watches has grown by 2pp year on year, to 5% of households.

**Figure 5.10 Ownership of internet-enabled devices**



Source: Ofcom Technology Tracker, H1 2016

Base: Adults aged 16+ n = 3737

Note: IP-enabled devices include laptop, games console (Xbox 360, PS3, Wii/Wii U), desktop PC, smartphone, portable games console (Nintendo DS range, PlayStation Portable/Vita), VOD STB (all Virgin TV customers, Sky+ HD, BT TV, TalkTalk TV), e-reader, tablet, netbook, smart TV, and HDMI device (Roku, Chromecast, Now TV).

\*E-reader and smart watch take-up stated here is per household, while elsewhere in the report we state figures by individual take-up. Smart watches were not included in the survey before 2015.

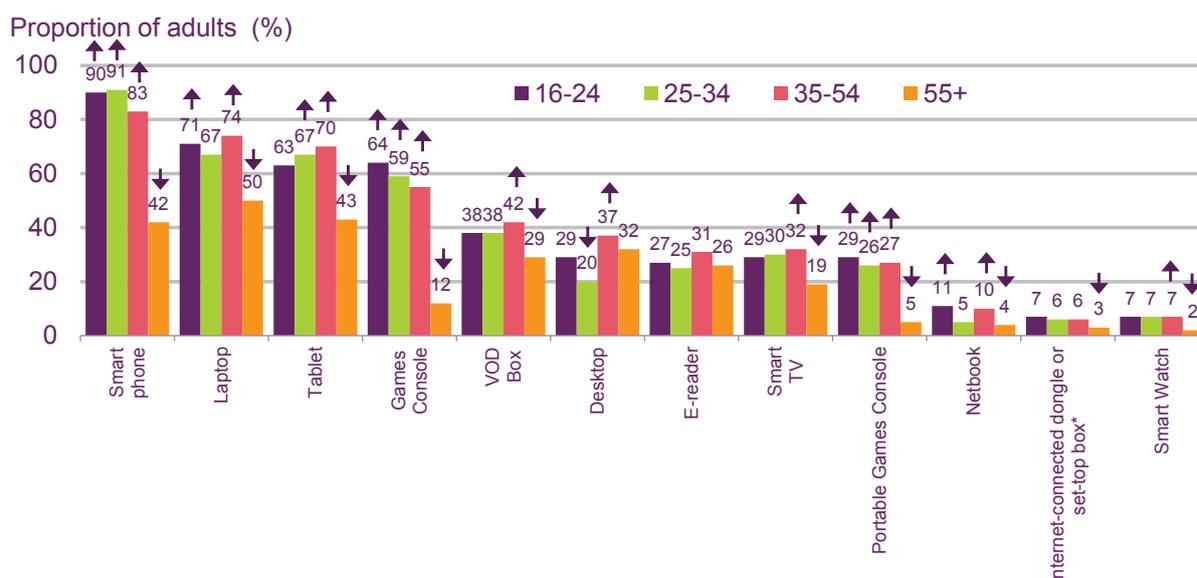
Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

### Smartphones are the most commonly-owned internet-enabled device among under-55s

Adults under 55 were more likely to own a smartphone in 2016, compared to the UK overall. The difference in the ownership of smartphones between younger and older age groups is stark: twice as many 16-24s and 25-34s owned a smartphone (90% and 91% respectively) than over-55s (42%). Over-55s were less likely than adults in the UK overall to own a smartphone (42% vs. 71%).

Laptops and tablets were second and third choices, respectively, among 16-24s and 35-54s. Among 25-34s, take-up of these two devices was level, at 67% each. In contrast, laptops were the most commonly-owned devices among over-55s.

**Figure 5.11 Take-up of internet-enabled devices, by age**



Source: Ofcom Technology Tracker, H1 2016

Base: Adults aged 16+, 16-24 n = 519, 25-34 n = 604, 35-54 n = 1172, 55+ n = 1442

Note: Ranked by overall household ownership

Internet-connected dongle or set-top box includes NOW TV set-top box, Roku, Google Chrome, Amazon Fire TV stick, Amazon Fire TV, Apple TV

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2016 and each age group

### AB households were more likely than the UK overall to own internet-enabled devices

AB households were more likely than those in the UK overall to own the following internet-enabled devices: smartphone, laptop, tablet, desktop, e-reader, smart TV and netbook. The exceptions to this were games consoles, VoD boxes, internet-connected dongles/ set-top boxes and smart watches; for these devices, AB households had ownership levels comparable to the UK overall.

In contrast, DE households were less likely than the UK overall to own the majority of internet-enabled devices, with the exception of a games console or a smart watch, which were comparable to the UK overall.

**Figure 5.12 Take-up of internet-enabled devices, by socio-economic group**



Source: Ofcom Technology Tracker, H1 2016

Base: Adults aged 16+, AB n = 797, C1 n = 1122, C2 n = 791, DE n = 1022

Note: Ranked by overall household ownership

Internet-connected dongle or set-top box includes NOW TV set-top box, Roku, Google Chrome, Amazon Fire TV stick, Amazon Fire TV, Apple TV

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2016 and each socio-economic group

### Smartphones were considered to be the most important device for internet access in 2016

More than a third (36%) of UK internet users considered smartphones to be their most important device for accessing the internet in 2016. This continues the trend that was observed in 2015 (Figure 5.14), the first year in which the smartphone overtook the laptop as the most important device for internet access (33% vs. 30% in 2015).



**UK internet users aged 16-34 considered the smartphone to be the most important device for internet access...**

**...while UK internet users aged 55 and over considered the laptop to be the most important device.**

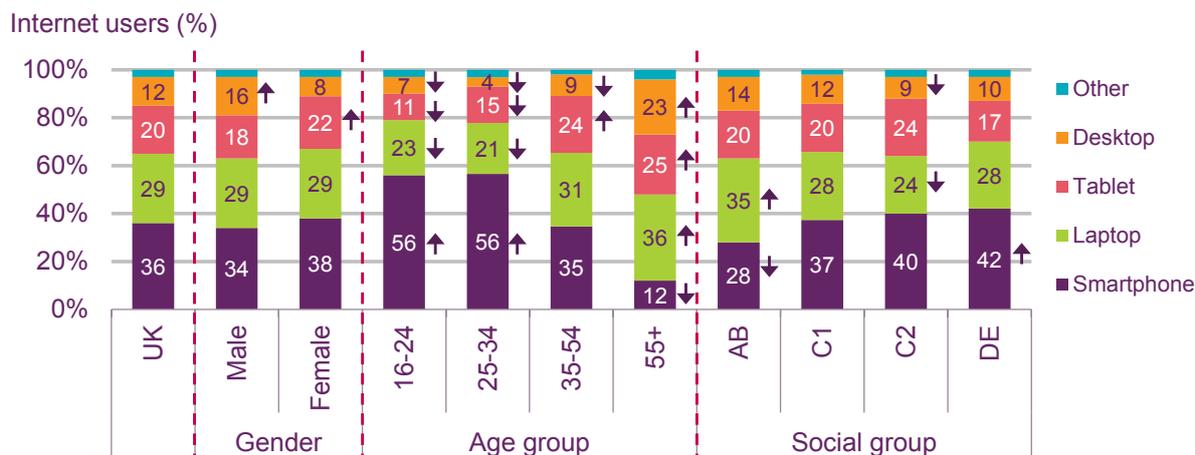


UK internet users aged 16-24 and 25-34 were more likely than the UK overall to consider the smartphone as their most important device for internet access, and the 25-34s were more likely to select this in 2016 than in 2015 (56% vs. 46%). These age groups were the least likely to select a laptop, a desktop or a tablet as their most important device for internet access, compared to the UK overall, in 2016.

In contrast, the over-55s were more likely than the UK overall to consider laptops, desktops or tablets as their most important device for internet access. This age group were less likely

than all other groups to own a smartphone (see Figure 5.11) and they were less likely to consider it as their most important device for internet access; just over one in ten (12%) chose this device in 2016.

**Figure 5.13 Most important device for internet access**



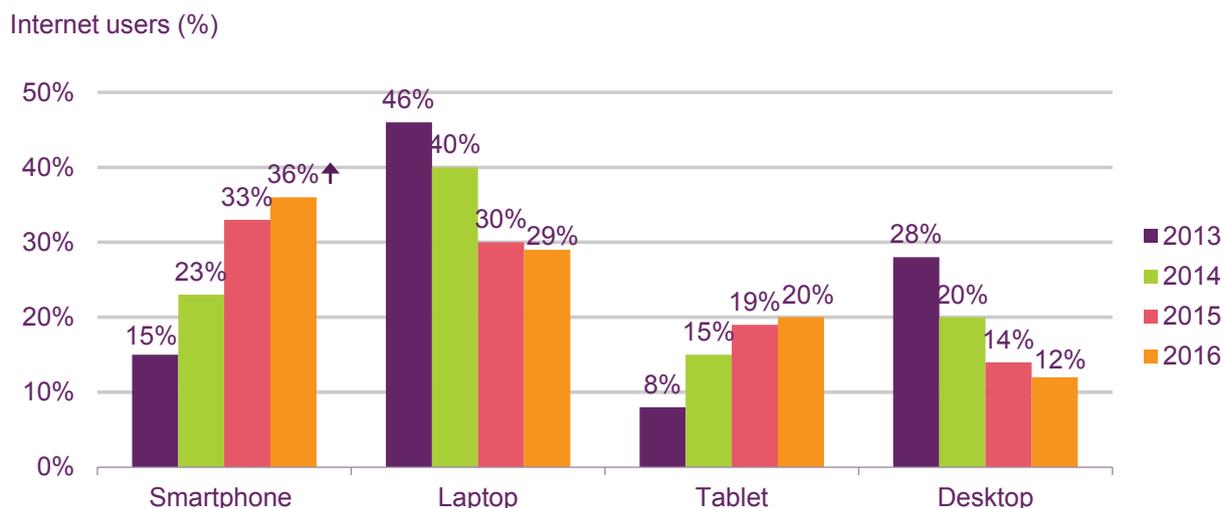
Source: Ofcom Technology Tracker, H1 2016

Base: All adults aged 16+ who use the internet at home or elsewhere (n = 3100 UK).

Significance testing: Arrows indicate any significant differences at the 95% confidence level between males and females, between UK 2016 and each age group and between UK 2016 and each socio-economic group.

QE40: Which is the most important device you use to connect to the internet, at home or elsewhere? 'Other' responses include: netbook, games console, e-reader, TV set, smart watch, other portable/handheld device, other device, none and 'don't know'.

**Figure 5.14 Most important device for internet access: 2013-2016**



Source: Ofcom Technology Tracker, Q1 2013-2014, H1 2015-2016

Base: All adults aged 16+ who use the internet at home or elsewhere (2016 n = 3100 UK).

Significance testing: Arrows indicate any significant differences at the 95% confidence level between 2016 and 2015 for each device.

QE40: Which is the most important device you use to connect to the internet, at home or elsewhere?

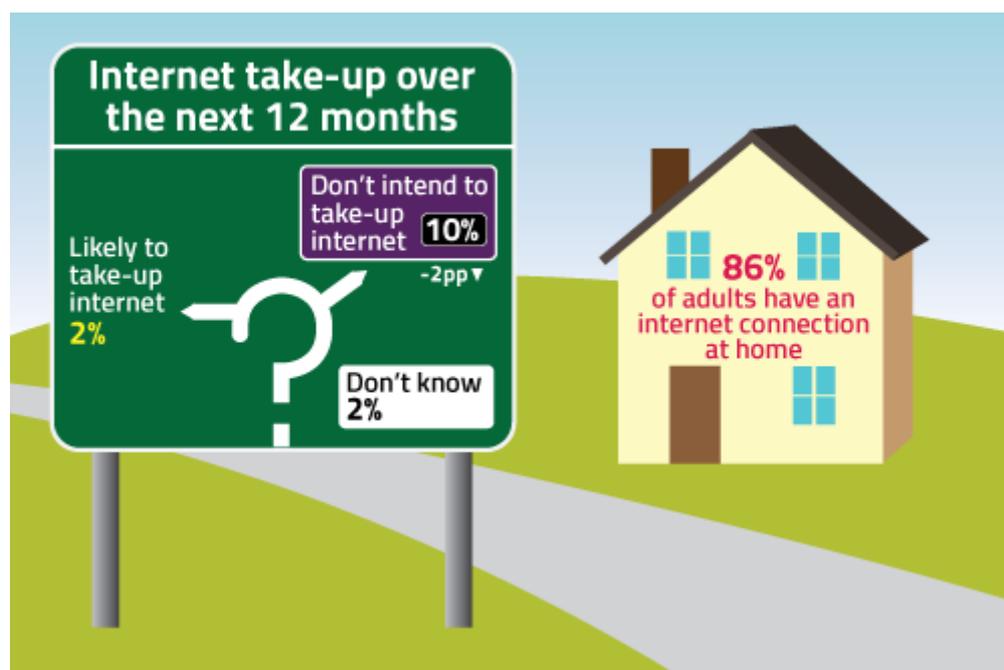
### 5.2.3 Digital inclusion

#### One in ten UK adults do not intend to take up the internet in 2016

Fourteen per cent of UK adults did not have access to the internet at home in 2016. Ten per cent of adults claimed that they did not intend to get the internet in the next 12 months (a decrease of 2pp since 2015), with the older age groups driving this - 83% of those who did not intend to get it were aged 55 and over.

Two per cent of UK adults said they did not know whether they would get the internet in the next 12 months, the same proportion as said they were likely to take up the internet in the next 12 months (2%).

**Figure 5.15 Internet take-up and intentions: 2016**



Source: Ofcom Technology Tracker, H1 2016

Base: All adults aged 16+ (n = 3737).

Significance testing: Arrows indicate any significant differences at the 95% confidence level between 2016 and 2015.

QE2: Do you or does anyone in your household have access to the internet at home (via any device)?/ QE24: How likely are you to get internet access at home in the next 12 months?

#### Among UK adults without internet access at home, half do not think they need it

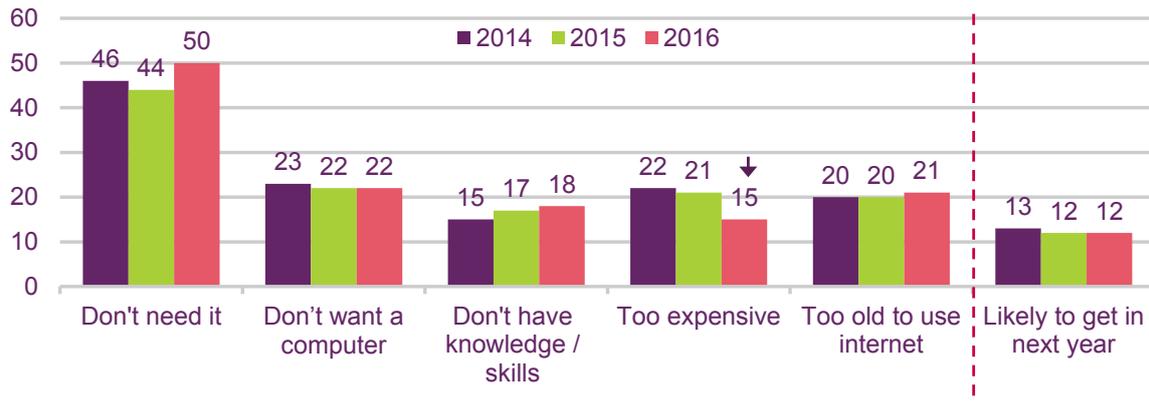
Half of UK adults who did not have access to the internet at home in 2016 said they did not think they needed it. This was the most frequently-cited reason, and was driven by the over-55s, who were the most likely to say this (90%).

The next most frequently-cited reasons for not having home internet access were that the respondent did not want to own a computer (22%), or that they felt they were too old to use the internet (21%). The majority of respondents who claimed to be too old were aged 65 and over (94%).

Just under two in ten adults (18%) without home internet access did not believe they had the knowledge or skills to use it. The proportion of respondents claiming not to have the internet at home because it was too expensive has decreased since 2015 (21% in 2015 vs. 15% in 2016).

**Figure 5.16 Main reasons for not having a home broadband connection**

Proportion of those without broadband (%)



Source: Ofcom Technology Tracker. Data from Q1 2014, then H1 2015-2016

Base: All adults without the internet aged 16+ (n=650)

Significance testing: Arrows indicate any significant differences at the 95% confidence level between UK 2015 and UK 2016.

QE25A: Why are you unlikely to get internet access at home in the next 12 months?



## 5.3 Online content

This next section explores the content and services that people access online, including use of search engines, use of online video-sharing services and use of financial payment services.

### 5.3.1 comScore

To inform our analysis of people's use of online content and services in the UK, we have drawn on data collected by comScore. comScore is a global multi-platform measurement tool which measures the online behaviour of audience, brands and consumers.

The UK Online Measurement Company (UKOM) was formed in 2009 with a mandate from the advertising industry to establish measurement standards for digital media. UKOM appointed comScore as its exclusive partner for online media audience measurement in the UK in 2012. comScore will continue as UKOM's exclusive data supplier until at least March 2018.

This chapter draws mainly on three comScore sources:

1. For analysis of laptop and desktop computer internet activity only, we use comScore Media Metrix (MMX) which employs comScore's Unified Digital Measurement (UDM) methodology, explained below.
2. For analysis of mobile internet and app activity only, on Android and iOS smartphones, iPads and Android tablets, we use comScore Mobile Metrix, which also employs comScore's Unified Digital Methodology for Android and iOS smartphones and iPads. Android tablet use is captured on tagged entities.
3. For analysis of internet activity across platforms, we use comScore MMX Multi-Platform, which provides metrics on desktop video.

Finally, mobile phone user behaviour is supplemented by consumer research from comScore MobiLens Plus (this is not part of the data suite endorsed by UKOM).

#### Methodology

comScore's Unified Digital Methodology (UDM) combines panel and census measurement techniques to obtain digital audience measurement statistics. UDM uses comScore's global measurement panel to determine audience reach and demographics. Census-level activity is captured from publishers' digital content, such as on websites, videos and computer and mobile applications. comScore combines census-level data with those captured from the panel to help provide a more accurate view of audiences and their consumption habits. This approach allows comScore to capture more accurate consumption activity from publishers, and attribute this to audience demographics in a way that is not affected by cookie deletion, blocking, and rejection.

#### Metrics

Throughout this report we make reference to a number of metrics, as defined below:

**Unique audience** – the total number of unique persons who visited a website or used an application at least once in a given month. Persons visiting the same website more than once in the month are counted only once in this measure.

**Active audience** – the total number of people who visited any website or used any application at least once in a given month; i.e. the number of people online and using any specific platform in a given month, no matter which website or app they used.

**Digital audience** – the active audience across all digital platforms (laptop/desktop computers, Android and iOS smartphones, iPads and, for those sites who have tagged in comScore’s census network, Android tablets).

**Active reach** – the proportion of the active audience made up by the unique audience of a website.

**Time spent per month** – the average time spent browsing a website per unique visitor per month (excludes time spent watching online video and listening to streamed music).

### Dictionary

Each of the entities reported by comScore is attributed to a level in comScore’s Client Focused Dictionary. Several entities (including apps) can exist within one service (e.g. BBC Sport and BBC iPlayer) and comScore’s dictionary defines how these entities are structured and related to each other. It is client-focused because comScore’s clients define how their websites appear in reports according to this dictionary. All comScore reports use the same six-tiered dictionary structure, as explained below:

**Property [P]** - *The highest level of reporting within the dictionary. Properties represent all full domains (i.e. felmont.com), pages (i.e. sports.felmont.com/tennis), applications or online services under common ownership or majority ownership for a single legal entity. A property may also contain any digital media content that is not majority-owned but has been legally signed over for reporting purposes by the majority owner.*

**Media Title [M]** - *A Media Title is an editorially and brand-consistent collection of content in the digital landscape that provides the marketplace with a view of online user behaviour. This may represent a domain, a group of domains, online service or application.*

**Channel [C], SubChannel [S], Group [G] and SubGroup [SG]** - *Within a Media Title there may be grouped URLs of editorially consistent content that make up a Channel. For some of the largest Media Titles, Channels themselves may be broad, and Subchannels, Groups and Subgroups within the larger Channels may prove useful for categorisation within the comScore Dictionary.*

## 5.3.2 Overview

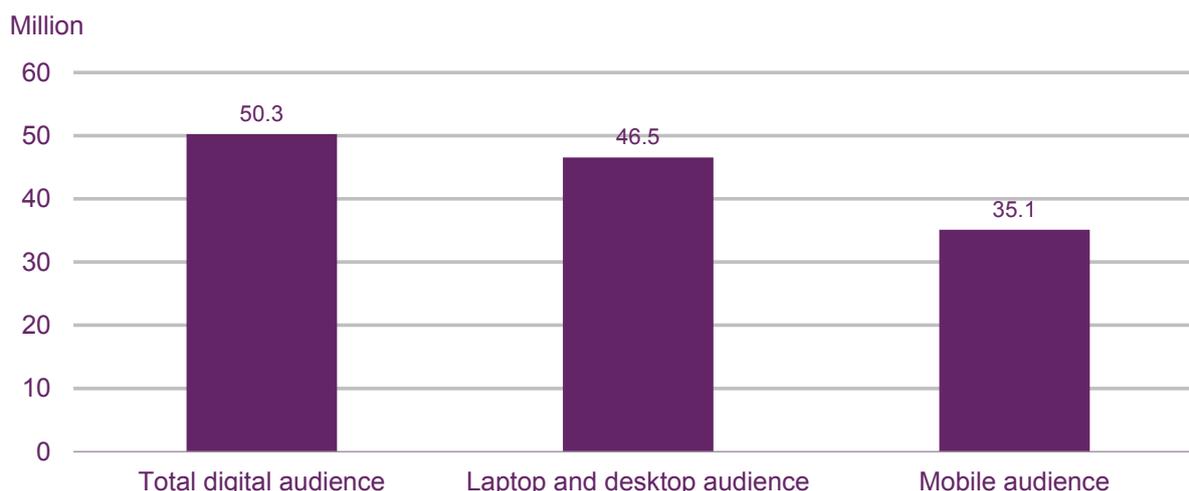
### The UK’s total digital audience stood at 50.3 million people in March 2016

The total UK digital audience (i.e. the online audience active on laptops, desktops and mobile devices<sup>82</sup>), amounted to 50.3 million in March 2016. The audience for laptop and desktops was 46.5 million in March 2016, while the mobile audience was 35.1 million.

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<sup>82</sup> This includes smartphones and tablets.

**Figure 5.17 Active internet audience: March 2016**



Source: comScore MMX, UK, home and work panel, March 2016; comScore MMX Multi-Platform, UK, March 2016; comScore Mobile Metrix UK, March 2016

Note: 'Digital audience' is the unique audience across desktop/laptops and mobile. Mobile audience includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data.

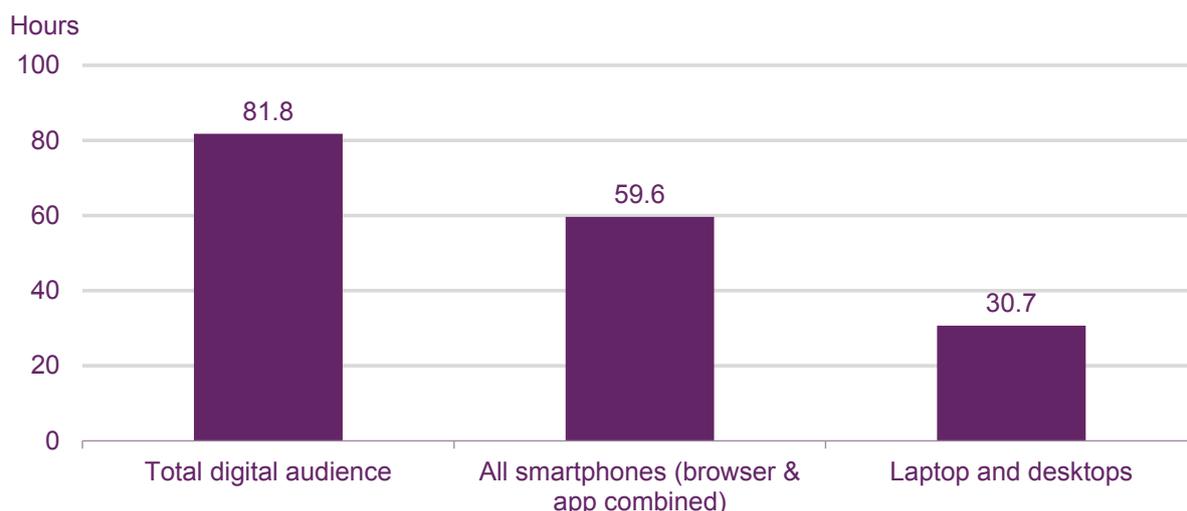
### **The average time spent online on smartphones was higher than on laptops and desktops in March 2016**

The total digital audience spent an average of 81.8 hours online in March 2016. The average time spent online by a smartphone internet user in March 2016 was 59.6 hours.<sup>83</sup> This is noticeably more than the average time spent online by internet users on laptops and desktops (30.7 hours in March 2016).<sup>84</sup>

<sup>83</sup> Average time spent on smartphones is calculated by taking the total time spent online on smartphones in a given month and then dividing it by the total number of people who access the internet on a smartphone in a given month.

<sup>84</sup> Average time spent on laptops and desktops is calculated by dividing the total time spent online on laptops and desktops in a given month by all the total number of laptop and desktop internet users in a given month.

**Figure 5.18 Average time spent online: March 2016**

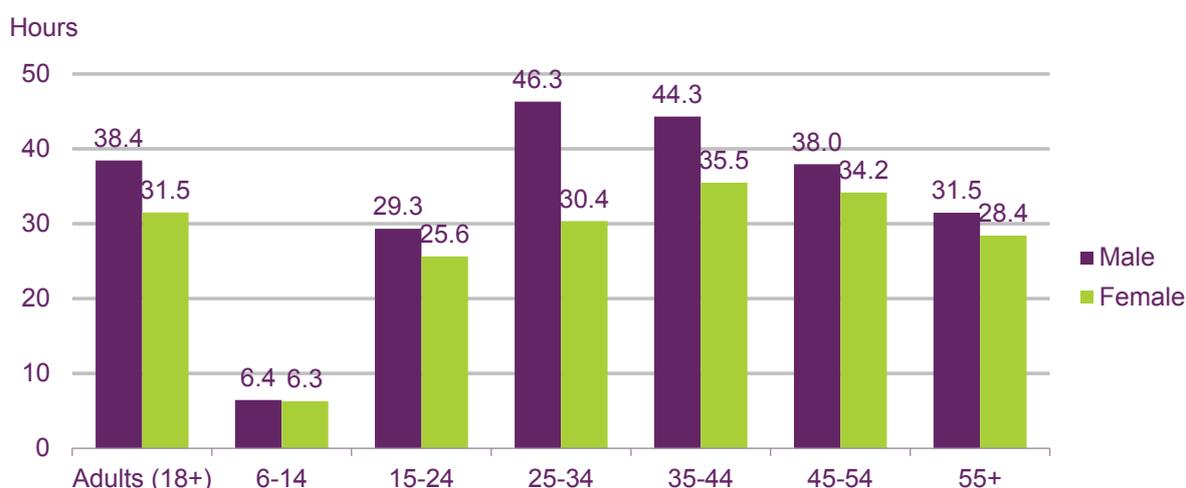


Source total digital audience: comScore MMX Multi-Platform, UK, March 2016, (bases include ages 6+ for desktops/laptops, 18+ for mobile devices). Source all smartphones: comScore Mobile Metrix, UK, 18+, March 2015. Source laptops and desktops: comScore MMX, home and work panel, UK, 6+, March 2015; Note: All smartphones, includes iPhones and Android handsets, browser and application use.

**Men spent more time than women online on laptops and desktops in March 2016**

Across all age groups, men spent more time than women online on a laptop or desktop computer in March 2016. Male users aged 25-34 spent the greatest amount of time online at work and home, at 46.3 hours. For female users, those aged 35-44 spent the most time online on a laptop or desktop computer, at 35.5 hours.

**Figure 5.19 Average time online on a laptop/desktop, by age and gender: March 2016**



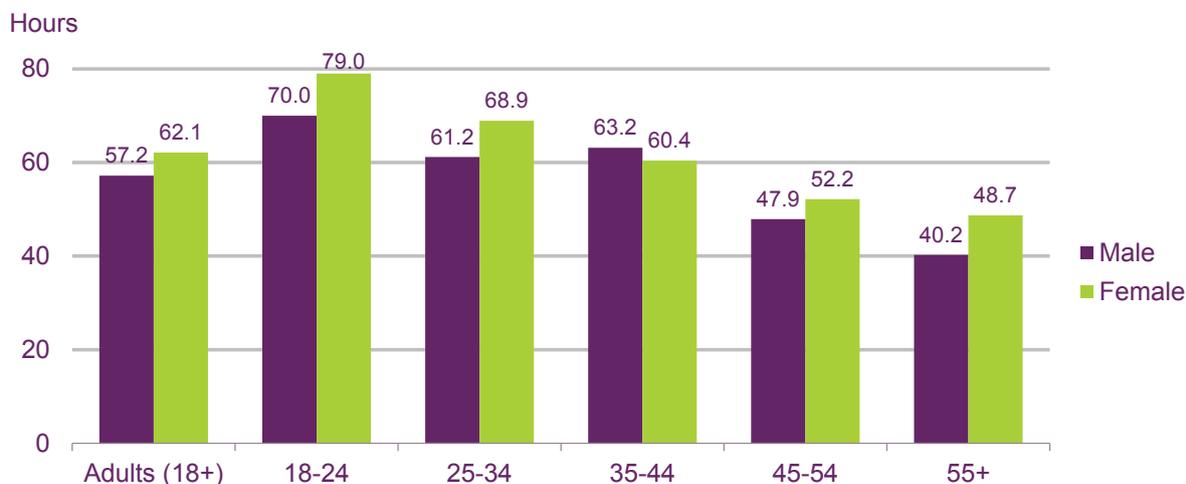
Source: comScore MMX, home and work panel, March 2016  
 Note: Time spent online is a measure of time spent browsing web pages on laptop and desktop computers only. It excludes time spent accessing other media such as audio or video content.

**Women spent more time than men online using smartphones in March 2016**

With the exception of the 35-44 age group, women spent more time than men online on their smartphones in March 2016. Men spent an average of 57.2 hours online on smartphones,

compared to 62.1 hours for women. For both men and women, the 18-24 age group spent the most time online, at 70 hours for men and 79 hours for women. Adults aged 55 and over spent the least amount of time online using their smartphones. The observation that younger adults spend more time online on their smartphones correlates with the high take-up of smartphones within this age group (Figure 5.11). It also supports the high proportion of the younger age groups who consider the smartphone to be their most important device for internet access (Figure 5.13).

**Figure 5.20 Average time online on a smartphone, by age and gender: March 2016**



Source: comScore Mobile Metrix, March 2016. Browser and application access combined.

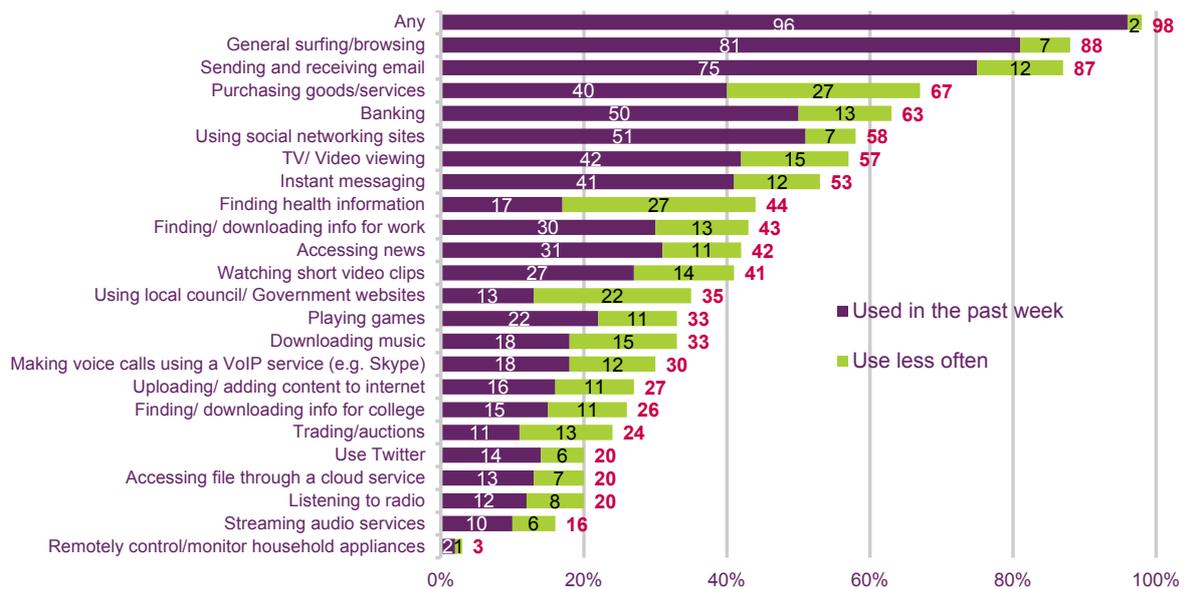
Note: Includes Android and iOS smartphones

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

### **Sending and receiving email remains the most common internet activity, after general browsing**

In 2016, general browsing was the most popular internet activity, with 81% of adults claiming to have used the internet for this in the past week. Sending and receiving email was the second most popular activity, with 75% of adults claiming to have done this in the past week. The least common activity was using the internet to remotely control or monitor household appliances, sometimes described as a 'smart-home' application.

**Figure 5.21 Claimed use of the internet for selected activities**



Source: Ofcom Technology Tracker, H1 2016

Base: All adults aged 16+ who use the internet at home or elsewhere (n = 3100 UK)

QE5A: Which, if any, of these do you use the internet for?

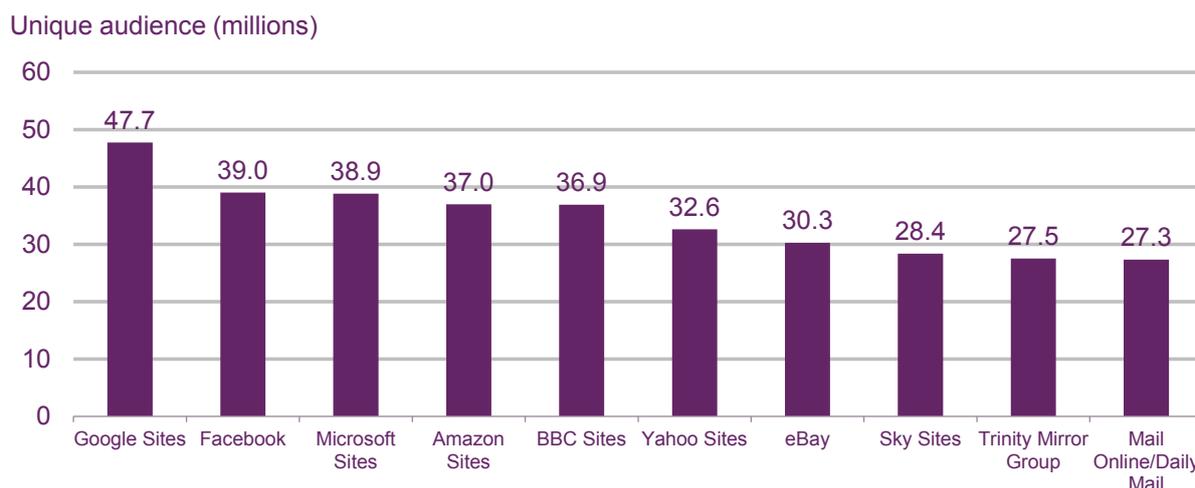
### Google’s services attracted nearly 48 million UK visitors in March 2016

To identify the organisation with the largest total online audience across all of their services, we report an organisation’s comScore Property (the sites and apps owned by the organisation).

Google’s services were visited by 47.7 million users in the UK in March 2016, with Facebook and Microsoft attracting a similar number of users (39 million and 38.9 million unique users respectively). The unique audience of the Google Sites comScore Property reflects the high audience for the services that are captured within this, including Google Search and YouTube.

Four of the ten most popular comScore internet Properties in the UK were organisations based in the UK: the BBC, Sky’s sites, Trinity Mirror Group and Mail Online/ Daily Mail. The four UK organisations in the top ten were all related to media and communications: broadcasters (BBC sites and Sky sites) and publishers (Trinity Mirror Group and Mail Online/Daily Mail).

**Figure 5.22 Top ten most popular comScore Properties among the total digital audience: March 2016**



Source: comScore MMX Multi-Platform, UK, March 2016

All sites listed are at the property level [P]. Please note MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams, on-network and Wi-Fi mobile browsing and app use.

Note: Starting with July 2013 data, comScore added tablet data to the mobile data field of MMX Multi-Platform. Only those entities that have been tagged as part of the census network report tablet usage data.

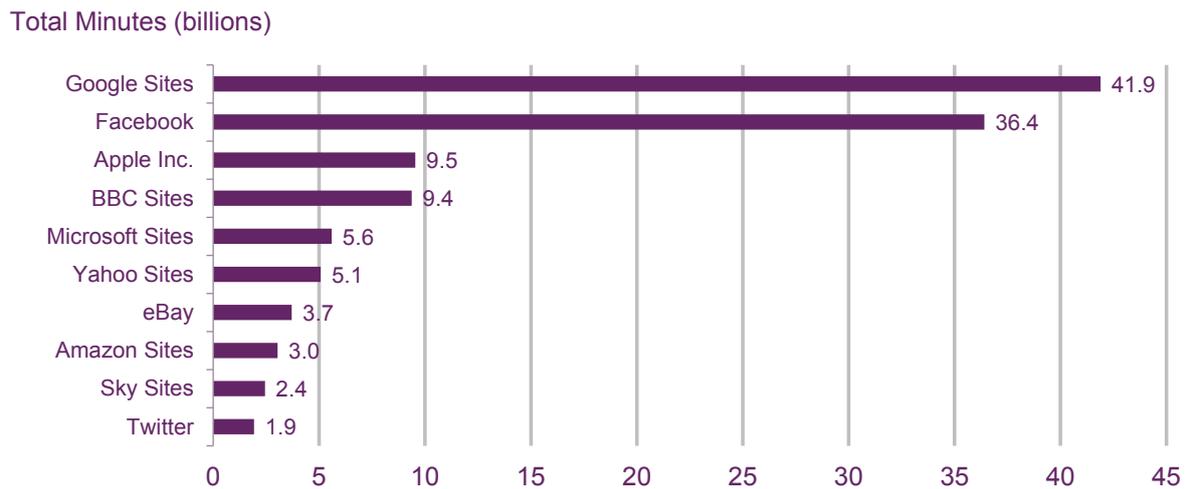
### People spent most time browsing websites and apps owned by Google

In March 2016, UK visitors to Google-owned sites<sup>85</sup> and apps spent nearly 42 billion minutes on them across laptop, desktops and mobile devices. The second most popular Property by time spent was Facebook (36.4 billion minutes); this includes Facebook, Messenger, Instagram and WhatsApp.

There were two Properties that were not among the ten most popular in terms of their digital audience size, but were among the ten most popular by time spent: Apple Inc. and Twitter.

<sup>85</sup> Google-owned sites include Google Search, Google Maps, Gmail and YouTube.

**Figure 5.23 Top ten comScore properties among the total digital audience, by time spent: March 2016**



Source: comScore MMX Multi-Platform, UK, March 2016

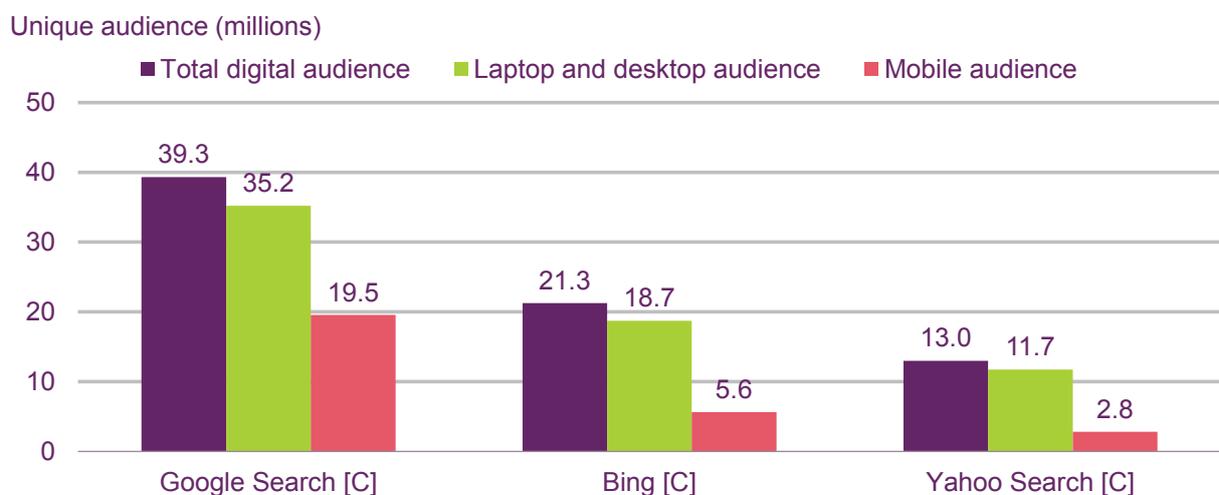
Note: All sites listed are at the property level [P]. Time spent online is a measure of time spent laptop/desktop webpage browsing and on-network and Wi-Fi mobile browsing and application data. It excludes time spent accessing audio content

### 5.3.3 Search engines

#### Google Search was the most-visited search engine in March 2016

Google Search had a digital audience of 39.3 million across all platforms in March 2016, constituting an active reach of 78% of the total digital audience. The second most visited search engine was Microsoft's search engine, Bing, followed by Yahoo Search. The same ranking is seen across laptop and desktop audiences, as well as across the mobile audience.

**Figure 5.24 Audience of search engines: March 2016**



Source: comScore MMX Multi-Platform, comScore MMX, comScore Mobile Metrix, UK, March 2016  
 MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams and mobile use. 'Total mobile' includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data.

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

### 5.3.4 Online video-sharing services

In this section we examine take-up and use of online video sharing sites in the UK, such as YouTube and Vimeo. These online video sites generally include other features and functionalities, such as the ability to comment on videos or share them on other social media sites such as Facebook and Twitter.

#### **YouTube's digital audience is higher on mobile devices than on desktops and laptops**

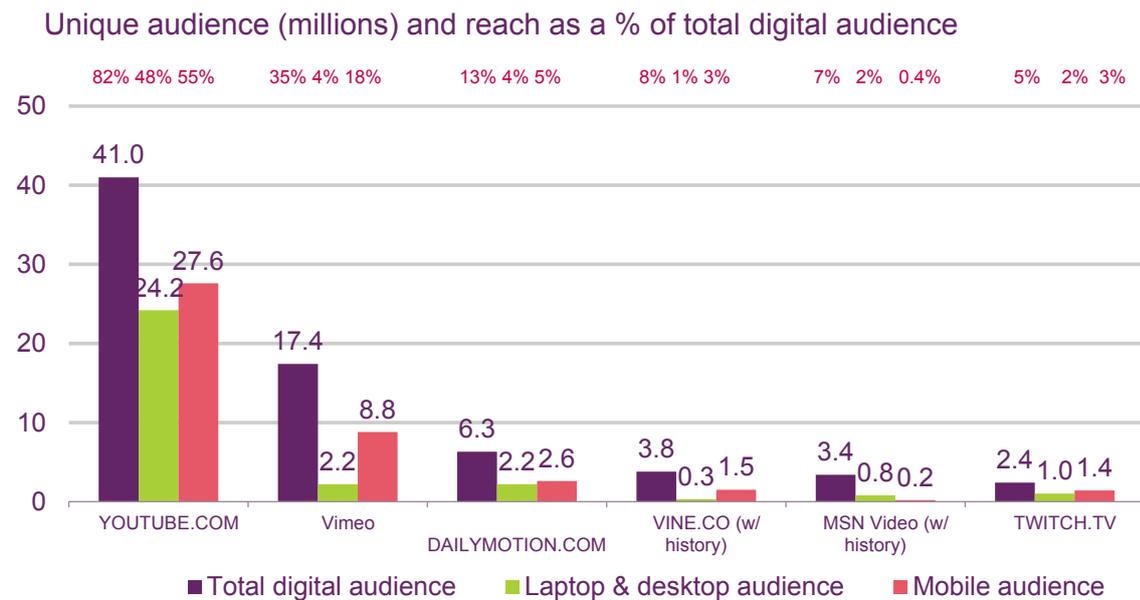
Of all the selected online video sharing sites, YouTube had the largest digital audience in the UK, at 41 million in March 2016 (an active reach of 82% across the total digital audience). YouTube had a greater audience on mobile devices (which includes tablets) than on laptops and desktops in March 2016. The total mobile audience for YouTube was 3.4 million higher than the audience on laptops and desktops (27.6 million vs. 24.2 million respectively). YouTube's active reach across the mobile audience was 55%, 7pp higher than the reach on laptops and desktops (48%). One reason why YouTube's mobile audience is greater than its laptop and desktop audience is likely to be because the YouTube app is generally pre-installed on Android mobile devices.

Vimeo had the second largest unique audience in March 2016, at 17.4 million. As with YouTube, Vimeo's mobile audience (8.8 million) and reach (18%) was higher on mobile devices than on laptops and desktops (2.2 million, with a reach of 4%). Vine, MSN Video and Twitch.TV were among the online video sites which had the lowest unique audiences and active reach in April 2016. Twitch.TV had the lowest unique audience overall, at 2.4 million (5% active reach), and had a similar unique audience across mobile devices and laptop and desktops (1 million and 1.4 million respectively). This could be due to the nature of the service and its appeal to a more select audience than other video sharing sites.<sup>86</sup>

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<sup>86</sup> Twitch.TV is a live streaming video platform that is targeted at video gamers. It allows users to watch live streams of users playing video games, and to broadcast their own streams. The service has a particularly high reach among younger age groups. In March 2016 16% of Twitch.TV's digital audience was aged 18-24 (for cohorts between the ages of 25 and 55 and over, reach was less than 10%). Reach was particularly high among males aged 18-24, at 25% (compared with 6% of females aged 18-24).

**Figure 5.25 Unique audience for selected online video sharing sites: March 2016**



Source: comScore MMX, UK, home and work panel, comScore MMX Multi-Platform, UK and comScore Mobile Metrix, UK. All March 2016

Note: MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams and mobile use. Mobile use includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data.

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

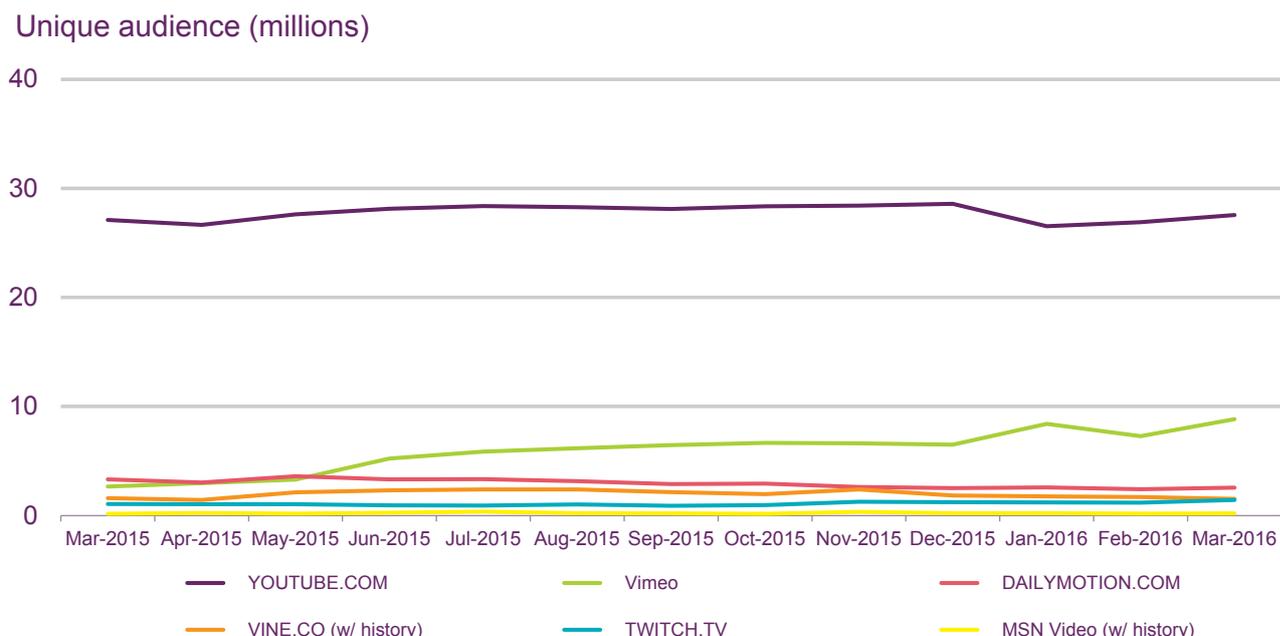
comScore entities used were: [M] YOUTUBE.COM, [P] Vimeo, [P] DAILYMOTION.COM, [M] VINE.CO, [c] MSN Video (w/history), [P] TWITCH.TV

### **YouTube consistently had the highest reach on mobile devices between March 2015 and March 2016**

YouTube was the most-visited video site on mobile devices, out of all the selected video sites. Its unique audience was consistently high between March 2015 and March 2016, an average 27.7 million per month. Since March 2015 there has been a noticeable increase in the unique audience of Vimeo on mobile devices, and in May 2015 the site overtook DailyMotion to become the second most-visited video site on mobiles.

In contrast, MSN Video had the lowest reported unique audience between March 2015 and March 2016.

**Figure 5.26 Unique audience of selected online video sharing sites on mobile phones: March 2015 to March 2016**



Source: comScore Mobile Metrix, March 2015-March 2016

Note: Mobile use includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data. comScore entities used were: [M] YOUTUBE.COM, [P] Vimeo, [P] DAILYMOTION.COM, [M] VINE.CO (w/history), [P] TWITCH.TV, [c] MSN Video (w/history).

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

### 5.3.5 Online retail and mobile payments

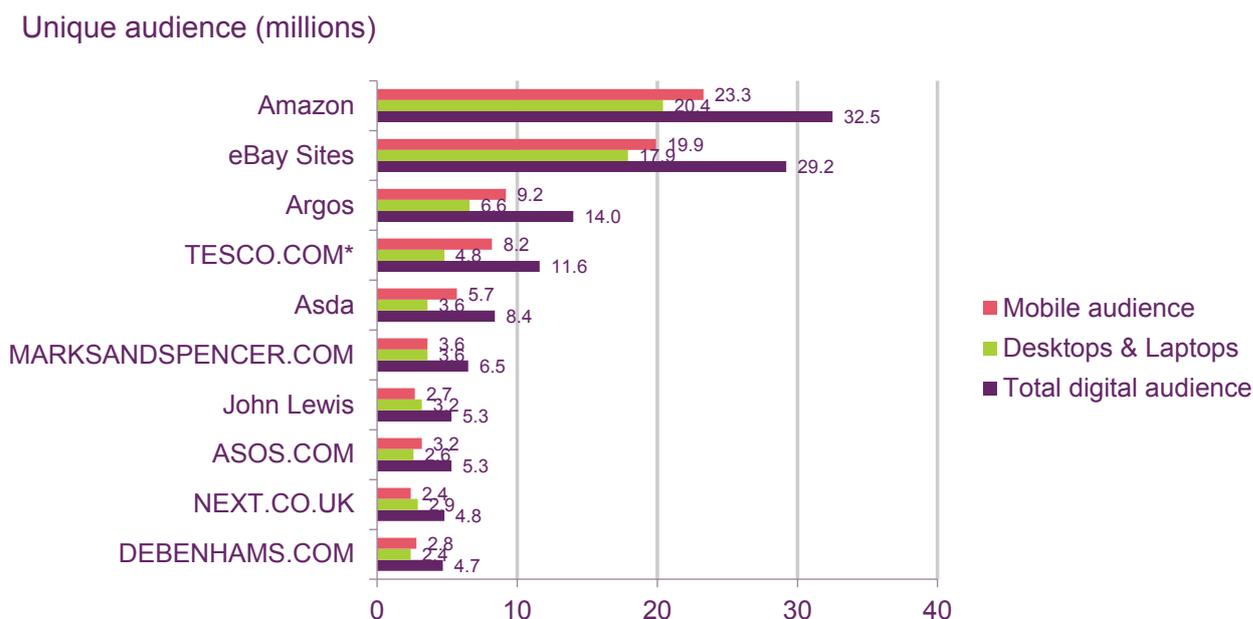
In this section we examine take-up and use of online retail sites and mobile payment services in the UK.

#### Almost two-thirds of the UK digital population visited Amazon in April 2016

Of all the selected online retail services, Amazon had the largest digital audience across all devices (laptops, desktops and mobile devices), at 32.5 million visitors in April 2016 (65% of the total digital audience). eBay was the second most popular online retail site visited in April 2016, with 29.2 million visitors (65% of the total digital audience), followed by Argos with 14 million visitors (48% of the total digital audience).

With the exception of John Lewis, Marks & Spencer and Next, more people accessed online retail services on mobile devices rather than on laptops and desktops.

**Figure 5.27 Digital audience of selected online retail services: April 2016**



Source: comScore MMX Multi-Platform, comScore MMX, comScore Mobile Metrix UK, April 2016  
 Note: MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams and mobile use. Mobile use includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data. comScore entities used were: [M] Amazon, [M] eBay sites, [M] Argos, [M] TESCO.COM\*, [M] MARKSANDSPENCER.COM, [M] Asda, [M] John Lewis, [M] NEXT.CO.UK, [M](u) ASOS.COM and [M] DEBENHAMS.COM.

\*Indicates that the entity has assigned traffic to certain pages in the domain to other entities

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

### Three in ten mobile internet users accessed their bank account via their mobile phone in March 2016

Thirty per cent of mobile internet users accessed their bank account via their mobile phone at least once a month (using a three-month average). This is more than double the proportion of mobile internet users who accessed their credit card accounts via their mobile phone (14%). Electronic payments/ money transfers were also a popular activity; two in ten (20%) mobile internet users used their mobile phone to do this activity at least once a month. This is a stark difference to the 6% who made a mobile payment at a physical point of sale (POS).<sup>87</sup>

A similar proportion of mobile internet users made mobile payments using near-field communications (NFC)<sup>88</sup> and QR codes<sup>89</sup> (4% and 3% respectively). A range of mobile payment services are available in the UK<sup>90</sup> that use NFC technology to allow users to make

<sup>87</sup> This figure is of total net mobile payments at a point of sale. There may be some overlap in those who used QR codes and NFC technology to make payments.

<sup>88</sup> NFC technology allows users to make payments by holding their NFC-equipped phone against a reader that can also be used to read contactless payment cards and tickets.

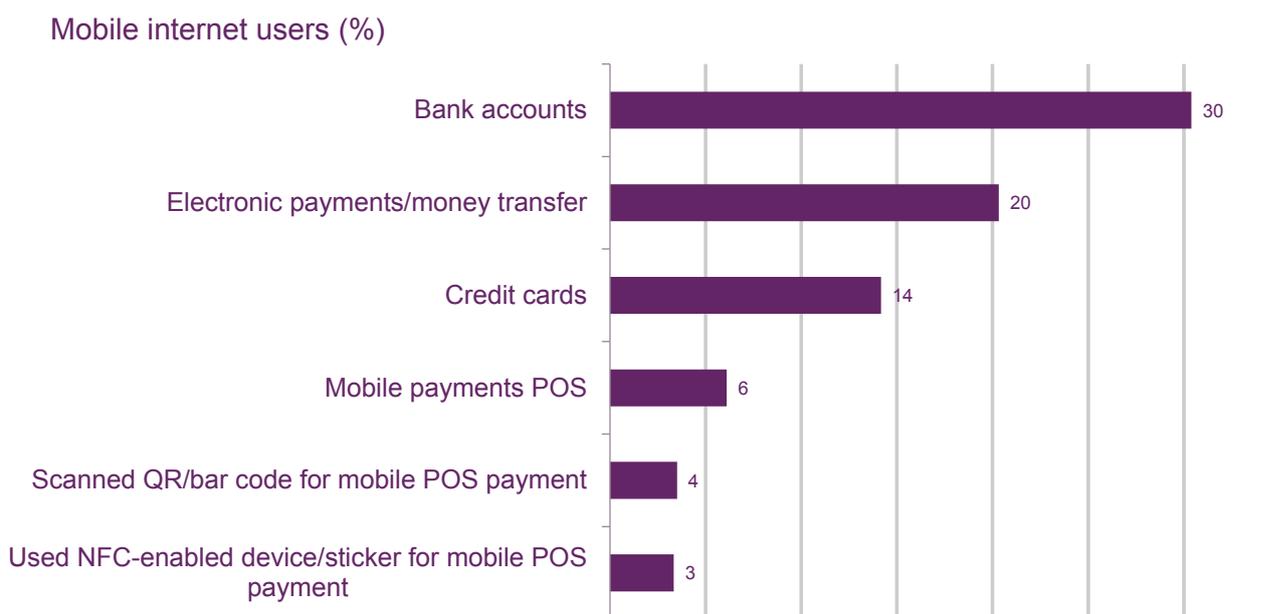
<sup>89</sup> QR codes are a type of two-dimensional barcodes and can be used as an alternative to NFC technology for mobile payments.

<sup>90</sup> Note, the whole range of available contactless payment services is not covered by comScore MobiLens Plus.

contactless payments using their mobile phone.<sup>91</sup> Apple Pay (launched in July 2015 in the UK) and Android Pay (launched in May 2016) both use NFC technology, enabling users to make contactless payments in selected retailers, as well as to pay for public transport in London. As with contactless card payments, the individual banks and vendors that support Apple Pay and/or Android Pay set a limit on the amount of money that can be paid using the services. Samsung is reportedly planning to launch its own NFC-enabled service, Samsung Pay, in the UK sometime in 2016.<sup>92</sup>

Not only device manufacturers and platform operators are offering mobile contactless payments services to UK consumers; Barclaycard added NFC mobile payment functionality to its Barclaycard customer app for supported Android devices in November 2015.<sup>93</sup>

**Figure 5.28 Selected mobile payments and financial services activities conducted by mobile internet users: March 2016**



Source: comScore MobiLens Plus, UK, three-month averages ending March 2016  
Base: Mobile internet users 13+

### 5.3.6 Online news

In this section we look at the take-up and use of online news sites. The majority of the comparator online news sites used for this analysis are broadcasters and print publishers.

#### The BBC had the largest unique audience for online news in the UK in March 2016

The total digital audience for BBC News was 27.6 million in March 2016, accounting for a total active reach of 55% of the total digital population. This was the largest unique audience among the selected comparator online news sites,<sup>94</sup> and was 2.9 million larger than for the Daily Mail, the second most popular online news site (24.7 million). The BBC also had the largest mobile audience in March 2016, at 21.6 million. However, the difference between the

<sup>91</sup> It is also possible to make contactless payments using smart gear. For example, Apple Pay is available on the Apple Watch.

<sup>92</sup> <http://www.digitaltrends.com/mobile/samsung-pay-news/>

<sup>93</sup> <https://www.home.barclaycard/news/Barclaycard-mobile-app-transforms-android-phones-in-to-a-contactless-way-to-pay.html>

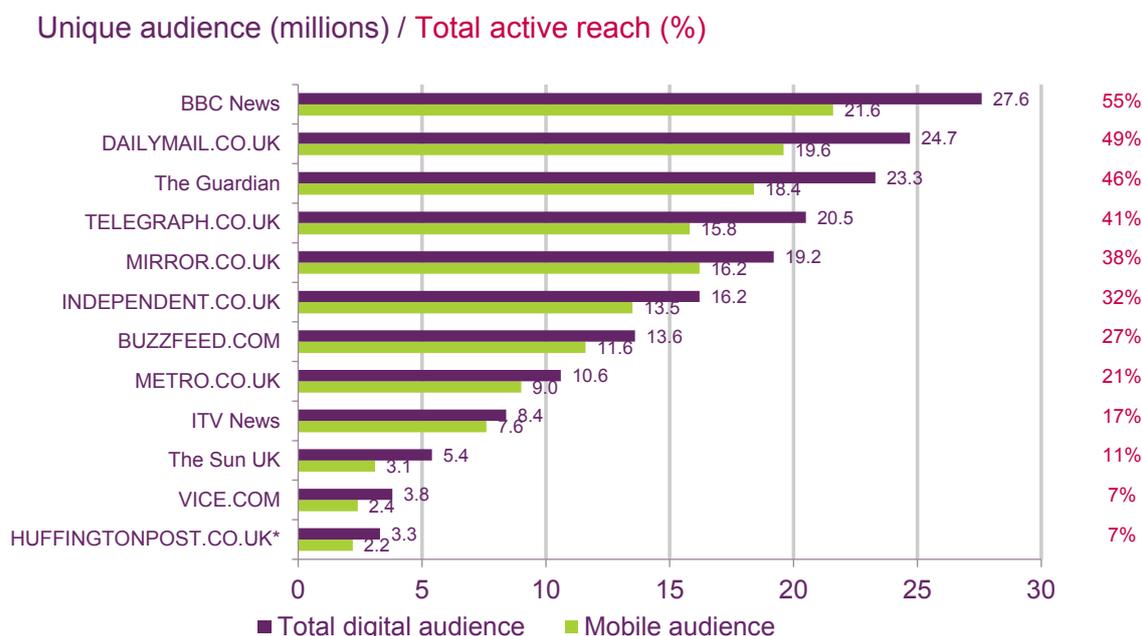
<sup>94</sup> This includes both browser and app use.

mobile audience for the Daily Mail, at 19.6 million, was much smaller than the difference between the total digital audiences for these two entities.

Of all the selected comparator news sites, the Huffington Post had the lowest unique total digital audience and mobile audience.

The most popular news sites in the UK are those provided by organisations with a presence on other media, typically print or broadcast. The Independent is now the digital-only news site with the highest reach, following the closure of its print operations in March 2016.

**Figure 5.29 Unique audience and reach of selected news services: March 2016**



Source: comScore MMX Multi-Platform and Mobile Metrix, UK, March 2016

Note: MMX Multi-Platform includes laptop/desktop browsing, laptop/desktop video streams and mobile use. Mobile includes Android smartphones and iOS smartphones and tablets. Only those entities that have been tagged as part of the census network report Android tablet usage data.

comScore entities used were: [C] BBC News, [M] DAILYMAIL.CO.UK, [P] The Guardian, [C] MIRROR.CO.UK, [M] TELEGRAPH.CO.UK, [M] INDEPENDENT.CO.UK, [P] BUZZFEED.COM, [M] METRO.CO.UK, [M] ITV News, [C] The Sun UK, [M] VICE.COM, [C] HUFFINGTONPOST.CO.UK\*

\*Indicates that the entity has assigned traffic to certain pages in the domain to other entities

Note: Changes were made to comScore Mobile Metrix methodology in January 2016. comScore entities were affected to varying degrees.

### 5.3.7 Online advertising

In this section we use data reported by the AA WARC Expenditure Report April 2016 and the IAB/PwC Digital Adspend 2015, which draws on data reported by the industry to IAB/PwC. We also use comScore's MobiLens Plus product to determine the reach of, and attitudes to, particular types of advertising among mobile internet users.

#### Total UK internet advertising expenditure increased by 17.3% in 2015

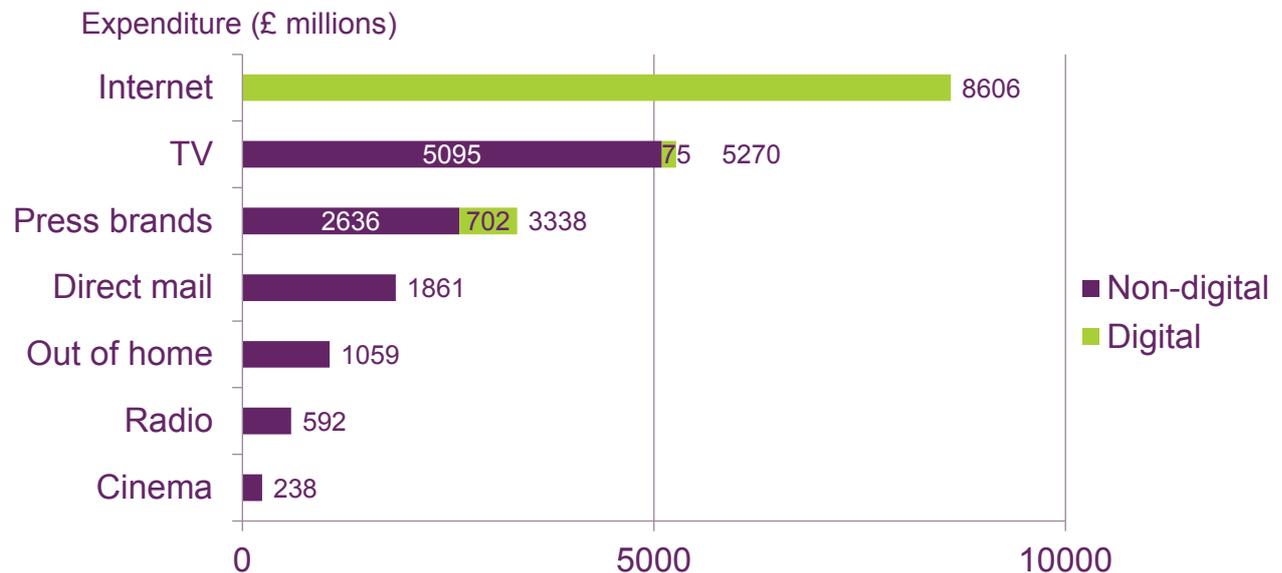
Total UK expenditure on internet advertising grew by 17.3% to £8.6bn in 2015. Internet advertising continues to be the largest type of ad spend in the UK,<sup>95</sup> and accounted for

<sup>95</sup> Internet has been the largest ad channel in the UK since 2011.

41.1% of the total estimated UK advertising spend in 2015. Estimated advertising spend on TV reached £5.3bn (including digital spend) in 2015, the majority of which was spot advertising, at £4.7bn.

Among the press brands, digital advertising stood at £702m in 2015, exceeding the total ad spend for radio (£592m) and cinema (£238m). Within the press brand category, digital advertising expenditure on regional news brands rose by 14.8% in 2015 to £199m, while digital advertising expenditure on magazines rose by 6.1% to £283m. National news brand digital spend grew by 2.5% in 2015 to £220m.

**Figure 5.30 UK advertising expenditure: 2015**



Source: AA/WARC Expenditure Report, April 2016

Note: 'Press brands' is a consolidation of magazine brands and national and regional news brands. Total digital advertising spend is double-counted in digital TV spend (broadcaster VOD revenue), and in 'press brands' digital spend.

Note: The AA/WARC data are net of discounts, and includes agency commission, but excludes production costs.

### **Paid-for search remains the highest type of expenditure, accounting for 51% of total digital advertising expenditure in 2015**

In the following sections, we use data from the IAB/PwC *Digital Adspend 2015* report. Following the conventions of this report, we are highlighting the published like-for-like comparisons; these include figures from companies which submitted figures in both 2014 and 2015.

Total estimated digital advertising expenditure grew by 16.4% year on year, from £7.3bn to £8.6bn in 2015. Paid-for search advertising accounted for half of digital ad spend, at £4.4bn (51% of total digital ad spend), a 15.3% year-on-year increase.

Display advertising was the fastest-growing type of digital ad spend, increasing by 24.5% year on year to £3bn in 2015 (a 35% share of total digital ad spend). Banner adverts were the largest type of display advertising, at £1.4bn, and accounted for 48% of display advertising spend. Content and native advertising accounted for a quarter (26%) of display

advertising (£776m, up 49.8% year on year), followed by online video<sup>96</sup> at 23% of display advertising (£711m, up 51% year on year).

**Figure 5.31 Digital advertising expenditure by type: 2009-2015**



Source: IAB / PwC Digital Adspend 2009-2015

### Pre-post roll advertising was the highest source of online video revenue in 2015

Pre-post roll advertising<sup>97</sup> remained the highest source of online video revenue, generating £711m in 2015 (up 23.9% year on year). Revenue generated from viral video & other advertising<sup>98</sup> fell by 34.6% year on year, from £34m to £21m.<sup>99</sup> Outstream / in-read video<sup>100</sup> (a new category added in 2015) generated £148m in 2015.

<sup>96</sup> Includes outstream / in-read video advertising (new for 2015), pre-post roll and viral video & other.

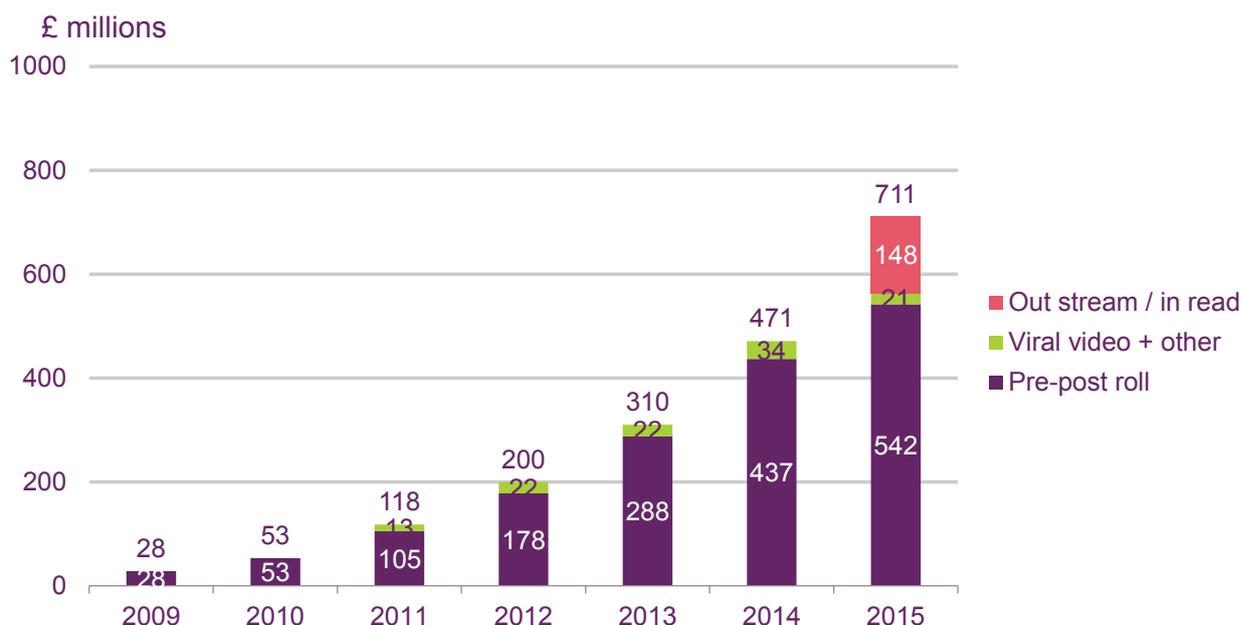
<sup>97</sup> These are the video adverts which are shown before, during and after a user plays a video on a website or app.

<sup>98</sup> This includes 'viral' video content as well as videos served in a social environment such as Facebook or Twitter.

<sup>99</sup> The drop in 'viral video & other' between 2014 and 2015 is because social revenues were re-categorised from this to 'outstream / in-read' video. The fall could also be due to inconsistencies between the years in terms of the number of media owners submitting revenues into that category. There is some re-classification, but a change in submitters will tend to have a more noticeable effect on a small category like 'viral video'.

<sup>100</sup> This includes static ads that appear in-feed or in-stream. Two examples of this are social in-feed (e.g. Facebook) and also within news sites. Revenue for video in-feed ads or in-stream should be included in social video if on a social media platform, or in outstream / in-read if on a non-social platform.

**Figure 5.32 Digital display video advertising revenue: 2009-2015**



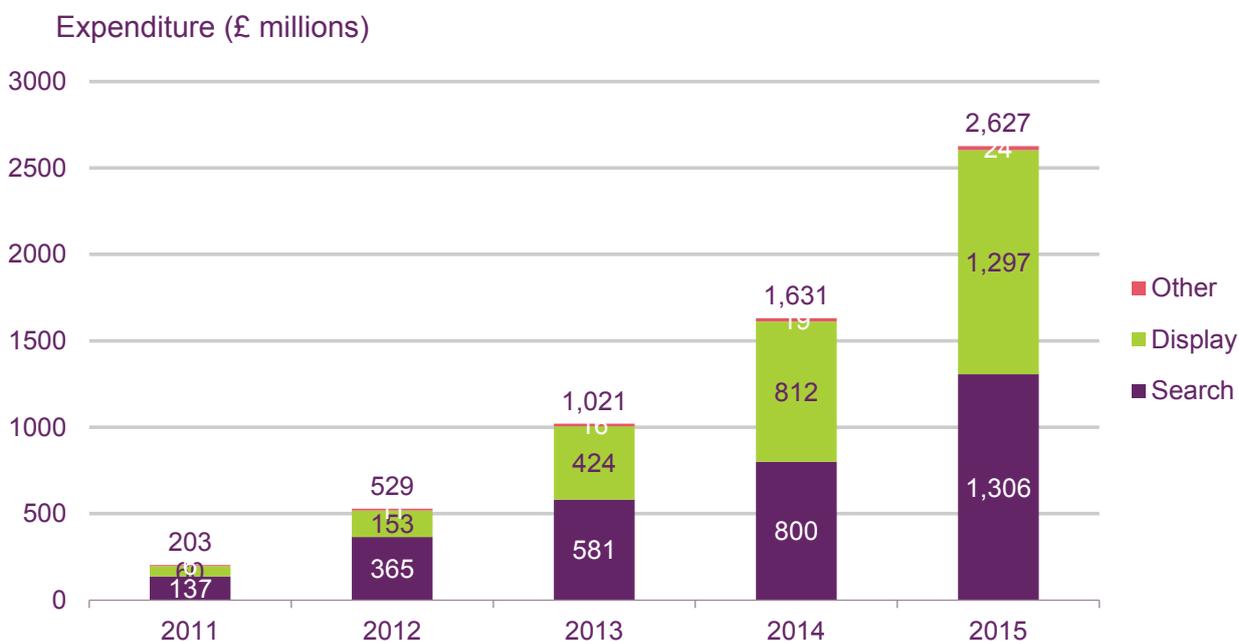
Source: IAB / PwC Digital Adspend 2009 -2015

Note: 'Viral video' was originally named 'social video'. It was changed to 'viral video' in 2015 to avoid confusion with video hosted on social media sites. It was also combined with 'other' video in 2015. 'Out stream / in-read video' is a new category for 2015, which includes video advertising on social media sites such as Facebook and Twitter.

**Mobile display advertising expenditure grew by 58.8% to £1.3bn in 2015**

Total mobile advertising expenditure grew by 60.3% (£996m) year on year to £2.6bn in 2015. Mobile search advertising spend grew by 63.6% in 2015 to £1.3bn, while mobile display advertising spend rose by 58.8% to £1.3bn.

**Figure 5.33 Mobile advertising expenditure: 2011-2015**



Source: IAB / PwC Digital Adspend 2011 -2015

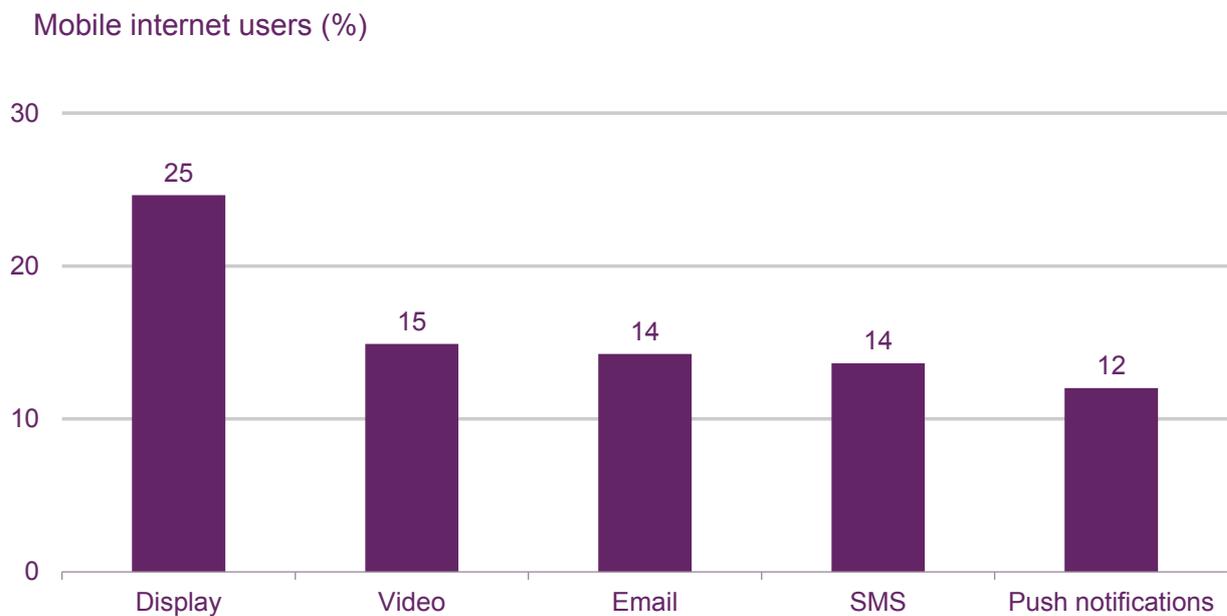
## The majority of mobile internet users experienced display advertising in April 2016

This next section focuses on data from comScore's MobiLens Plus product.

A quarter of mobile internet users experienced display advertising in April 2016 (three-month average). Display advertising on websites uses various media, such as images, audio, video and text, to communicate the advertising message to the end-user. Video advertising was the second most common type of advertising experienced by mobile internet users, at 15%.

Push notifications were experienced by the fewest mobile internet users, at 12% in April 2016. Push notifications are message alerts that automatically appear on-screen on mobile devices. They originate from apps which are installed by the mobile user on their device. Users do not have to be using the app itself, and their device can be locked, but will still receive these notifications. Push notifications therefore reach only those mobile users who have installed apps, and typically users are given the choice to opt in to receive notifications. This may explain the low proportion of mobile internet users who have experienced push notifications.

**Figure 5.34** Type of advertising experienced by mobile internet users: April 2016



Source: comScore MobiLens Plus, UK, three-month averages ending April 2016

Base: Mobile internet users 13+

## Ad blocking

While digital and mobile advertising continue to be growing areas of expenditure for advertisers, research suggests that this can be disruptive to the consumer experience. Ad blocking is a means of blocking these forms of advertising. Ad-blocking technology either hides online advertising, or stops adverts from being loaded on a webpage.

The majority of ad blocking occurs on laptop and desktops, where it is simple and effective. One of the most common forms of ad blocking is at the browser level; tools can be downloaded and added as an extension to a web browser, and these filter out content according to a set of criteria. It is slightly more difficult to block advertising on mobile devices, because the owner of the operating system has control over the software installed on the device. In addition, ad blockers which filter out adverts at a browser level would not be effective in blocking advertisements that appear within mobile applications. However, some options are available.<sup>101</sup>

Research suggests that consumers seek to use ad blockers because they dislike certain types of more intrusive ad formats, rather than a dislike of the adverts themselves. They often find them intrusive, irrelevant and distracting from the online experience.<sup>102</sup>

Consumer research estimates that 22% of online adults are currently using ad blockers in the UK. Of these, 26% are doing so on smartphones, and 21% on tablets. The most common use of ad blocking is on laptops and desktops (72% and 41% respectively).<sup>103</sup>

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<sup>101</sup> Enders Analysis

<sup>102</sup> Enders Analysis

<sup>103</sup> IAB Ad blocking Software Consumer Usage and Attitudes, Wave 4, February 2016





# The Communications Market 2016

**6 Post**

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## 6.1 Key market developments in post

### 6.1.1 Sector overview

With nearly a quarter of adults (23%) claiming that they prefer to shop online, the demand for parcel services is high. Research shows that shoppers value the ability to shop whenever they like and have their purchases delivered to their door. As such, home delivery rather than click-and-collect remains the most popular option for purchases. The majority of adults are aware of same-day and next-day delivery, although in most cases less than 50% of people had used them.

The letters sector continues to decline, with addressed letter volumes falling by 3.7% to 12.2bn in 2015. Access mail volumes rose very slightly and made up 58% of the addressed letter sector in 2015. The volume of addressed letters handled by end-to-end operators other than Royal Mail fell by 57% to 68m in 2015, primarily due to Whistl's withdrawal from the sector in June 2015. Business mail makes up nearly half of all addressed letter mail by revenue. In the parcels sector, multiple providers offer delivery services across the UK. We will be publishing more data on the parcels sector in our annual monitoring update later this year.

Generally, adults in the UK say they value postal services. The average number of items sent per month rose to 6.6 in 2015, of which 1.2 items on average were parcels. A majority of adults had not changed their use of post, compared to two years ago, and a majority do not expect their use of post to change in the next two years. Personal mail is the most common type of mail sent each month, albeit lower for the youngest adults (16-34s). A majority of adults say that they would feel cut off from society if they couldn't send or receive post, and six in ten adults say they are very or fairly reliant on letters and cards as a way of communicating.

Despite this, the use of digital substitutes remains high. Email, text messaging and mobile phone calls remain the most popular substitutes for post, with a majority of adults in the UK (56%) saying that they prefer to send emails rather than letters whenever possible. Nearly half of all adults (47%) say that they only use post if there is no alternative.

**Figure 6.1 UK postal services: industry key metrics**

| UK postal services industry                                 | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   |
|---|--------|--------|--------|--------|--------|--------|
| Addressed letter volumes                                    | 15.6bn | 14.6bn | 13.5bn | 12.9bn | 12.7bn | 12.2bn |
| Addressed letter revenues                                   | £4.1bn | £4.1bn | £4.2bn | £4.2bn | £4.3bn | £4.2bn |
| Proportion of access in total mail                          | 44%    | 49%    | 54%    | 56%    | 56%    | 58%    |
| Letter volumes delivered by operators other than Royal Mail | 11.3m  | 8.5m   | 18.0m  | 56.1m  | 158.5m | 67.6m  |
| Direct mail share of total advertising spend                | 15.9%  | 14.9%  | 14.5%  | 14.1%  | 13.9%  | 14.1%  |

Source: Royal Mail Regulatory Financial Statements, Royal Mail Wholesale, Royal Mail Group Annual Reports, AA/Warc.

Note: Royal Mail calendar year volume figures are derived from Ofcom calculations based on financial year figures in Royal Mail's Regulatory Statements and unaudited submissions to Ofcom and are therefore not directly comparable with Royal Mail's published accounts. Royal Mail figures relate to the 'Reported Business'. Earlier data are not comparable. Figures are nominal.

## 6.1.2 Cheaper, faster and better? Online shopping and parcel delivery in the UK

### The UK leads the way in online shopping

The UK is increasingly a nation of online shoppers. It was noted in Ofcom's *International Communications Market Report 2015* that spend on e-commerce in the UK was £1591 per head in 2014; this was 50% higher than in the US, which was the next highest-valued market. The Office for National Statistics reported that the amount spent online in the UK in May 2016 accounted for 14.3% of all retail spending excluding automotive fuel, compared with 12.1% the previous year.<sup>104</sup>

The growth in online shopping is seen as a driver of the parcels sector in the UK. Royal Mail estimates that the total blended market of parcels will grow at 4% per year in the medium term, and that its returns volumes have grown by 24% in the past year.<sup>105</sup>

Below, we explore the online shopping and delivery sector, and examine the use of online shopping and customers' reported attitudes and experiences.

### The willingness and desire to shop online is high

When YouGov asked UK adults about their preferred way of shopping, 23% said they preferred to shop online. Nearly half (46%) said they 'might shop online', depending on the product they were purchasing.

Research from Ofcom's *2015 Residential Postal Tracker* showed that nearly three-quarters of the adults (72%) surveyed had at some point ordered items to be delivered by post. This was more common among adults in the ABC1 group (80%) and respondents in rural locations (82%). Over-55s were the least likely to have ordered items to be delivered through the post, although a majority (60%) had done this.

The YouGov research noted that the number of adults who frequently shop online remains high. In 2016, only one in ten adults (10%) said that they never shopped online, while 15% said that they shopped online at least once a week.

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<sup>104</sup>See section 6: *Internet sales in detail* of the Office for National Statistics' *Retail sales in Great Britain: May 2016 statistical bulletin*,

<https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/may2016>,

<sup>105</sup> See page 8 of Royal Mail's Annual Report and Financial Statements 2015-16,

[http://www.royalmailgroup.com/sites/default/files/Annual%20Report%20and%20Accounts%202015-16\\_0.pdf](http://www.royalmailgroup.com/sites/default/files/Annual%20Report%20and%20Accounts%202015-16_0.pdf).

**Figure 6.2 Frequency of online shopping**



Source: YouGov Reports, *Innovations in Retailing 2016*, fieldwork March 2016.

Base: nationally representative adults 16+, 2016: 2003, 2015: 2114

Q5: How often do you purchase products online (including via your mobile)?

### ‘You can shop at a time convenient to you’

When asked about shopping online by YouGov, respondents agreed most commonly that ‘you can shop at a time convenient to you’ (62%). Delivery-related answers were also frequently chosen, such as ‘I like the fact that the items are delivered direct to your door’ (51%) although respondents also highlighted that ‘It is a hassle when you have to return items’ (38%) and ‘[I] do not like having to wait in for deliveries’ (26%). When presented with the statement ‘I do not like having to wait for my purchases to be delivered’, over-55s are less likely than any other age group to agree (10%).

However, the study found that in-store shopping was appealing to some, as a large number of adults (65%) agreed with the statement ‘I like being able to see, touch and try on the products before I buy’. The immediacy of in-store shopping was also highlighted, with half of the respondents (50%) agreeing with the statement ‘I like being able to make the purchase and take it home with me’.

These findings may suggest that customers value immediacy and convenience wherever they shop. Fast, convenient delivery options and a smooth process for returns appeal to customers who say they like to ‘try before they buy’. This might mean that a merged approach – perhaps the ability to try items ordered online at collection or return to a local store – might be a way to keep customers shopping happily online.

### The challenge of ‘quick and efficient delivery’ at little customer cost

Adults in the UK appear to expect quick deliveries when ordering online. When asked by YouGov about acceptable delivery times for items excluding large goods/furniture, delivered from within the UK, the majority of people (51%) indicated that between one and three days would be considered acceptable, followed by just under a third (32%) who said between four and six days (32%). Only one in ten people (10%) considered any time greater than six days acceptable.

The YouGov survey shows that adults are more willing to wait for parcels delivered from overseas. A third of adults (33%) said that they would be willing to wait between seven and ten days for items excluding large goods/furniture. This was the most common response, followed by between 11 and 14 days (22%), between four and six days (11%), and up to

three weeks (11%). Only 4% of respondents said they would expect to wait only between one and three days.

Data produced by IMRG/MetaPack show that 60% of domestic deliveries scheduled between January and December 2015 were economy delivery services (i.e. deliveries without an assured day or time slot, excluding next day). Just under four in ten (38%) deliveries were scheduled using specified-day services including next day, same day and nominated day. The remaining deliveries were sent using specified-time services. Purchasing habits continue to show a preference for economy delivery, which may reveal a desire for lower-price delivery.

In the YouGov survey, respondents were asked whether they would be willing to pay more for enhanced delivery features such as a faster delivery time, real-time tracking or changing delivery details after placing their order. A majority of respondents (55%) would not be prepared to pay to upgrade their deliveries at all. Less than one in five adults said they would be willing to pay for a 'faster delivery time' (16%) or a 'specified delivery time slot' (13%).

### **New delivery options are being trialled**

A number of companies are developing or trialling new services or products for parcel delivery. None of the services described below have launched across the UK yet, but they illustrate some of the innovations that might develop in the next few years.

Starship Technologies has trialled local self-driving delivery robots on the streets of Greenwich in south-east London. Each robot buggy is designed for local delivery of goods and groceries within a three-mile radius. The robots navigate the pavements on six wheels and each is equipped with technology to help it avoid collisions. The compartment of the robot buggy is locked throughout the journey and can only be opened by the intended recipient at the point of delivery. It was announced in June 2016 that Hermes would be testing delivery with Starship Technologies in Germany in the summer.

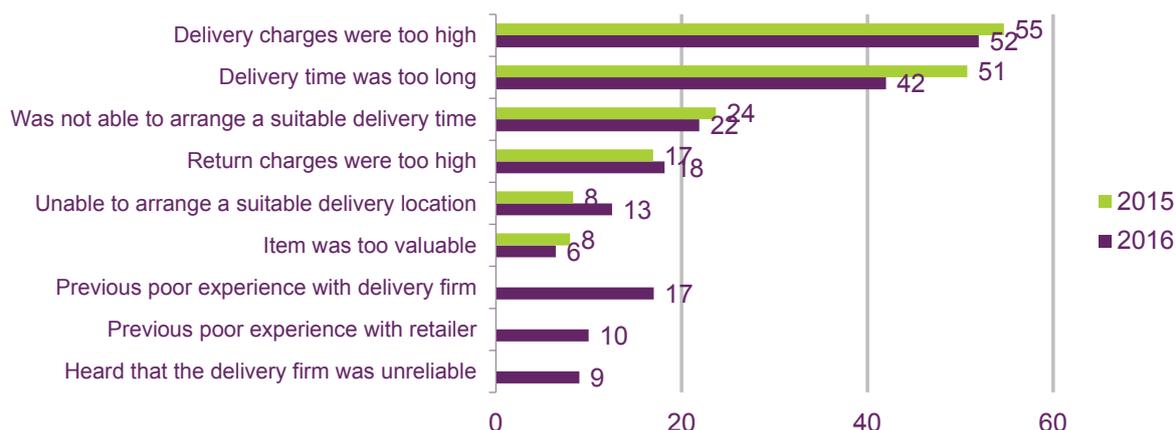
DHL announced in May 2016 that it had trialled parcel delivery by remotely-operated drone between January and March 2016. The operation resulted in 130 successful drone deliveries of 'urgently needed medicine or last-minute sports equipment' to the Bavarian village of Reit im Winkl. DHL said that these deliveries involved heavy loads, long distances and difficult mountain terrain. Drone delivery is also being developed by other operators.

The survey explored the factors that can affect willingness to buy products online. Four in ten adults (42%) said that concerns over the delivery of their items had stopped them completing their purchase. Of those adults, a majority (52%) reported that this was because 'delivery charges were too high', two in five (42%) said they thought that the 'delivery time was too long' and one in five (18%) said they were put off because return charges were too high.

Compared to the previous year, the number of respondents who said that the delivery time was too long was down by 9pp. This may be because retailers are offering faster and more specified delivery options so online shoppers are finding delivery more convenient.

**Figure 6.3 Reasons for stopping an online order**

Proportion of respondents (%)



Source: YouGov Reports, *Innovations in Retailing 2016*, fieldwork March 2016

Base: All adults aged 16+ who have not ordered a product due to delivery concerns, 2016: 842, 2015: 937.

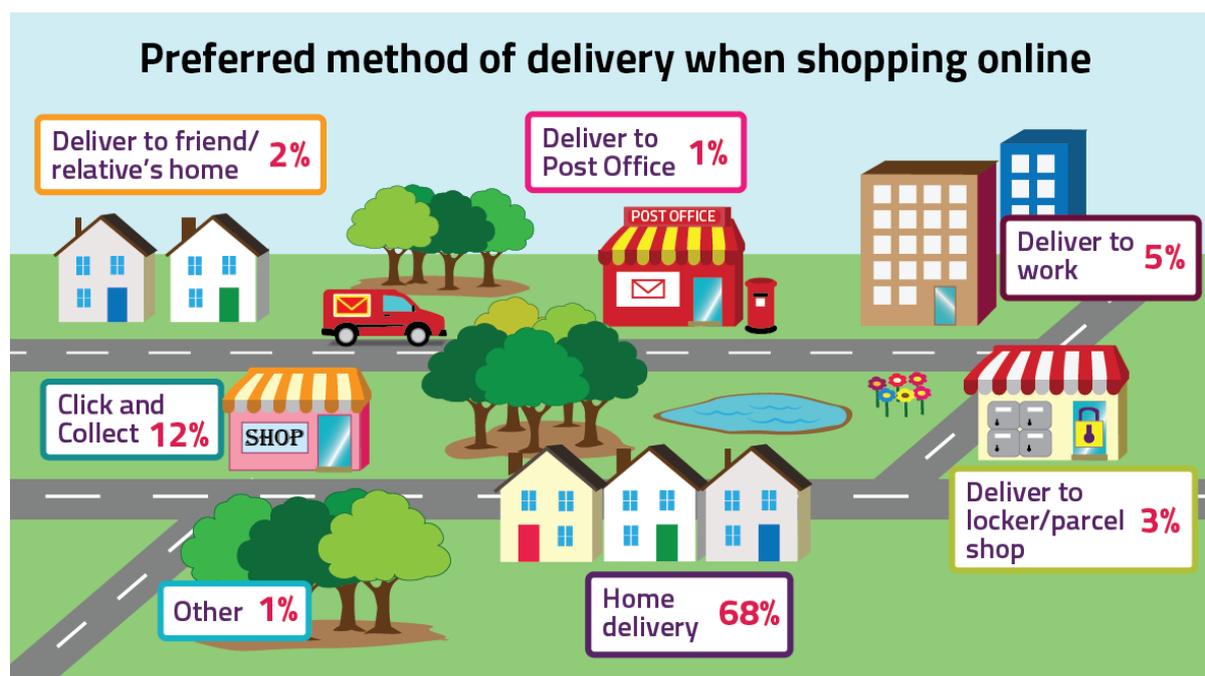
Q19: Why did your concerns regarding delivery stop you from ordering the product? Please choose all that apply.

Note: Three options were asked in 2016 for the first time so have no 2015 comparison.

### The house, the locker and the shop – convenience of delivery

Online shoppers now have a number of options for delivery, including home delivery, ‘click and collect’ services in store, collection from a third-party parcel shop, and parcel locker collection, among others. Despite this, seven in ten (68%) adults in a YouGov survey expressed a preference for home delivery when asked about delivery of their online shopping. This was more than five times greater than those who said that they would prefer ‘click and collect’ (12%). No other option received a preference higher than 5%, including ‘delivery to where you work’ and ‘delivery to a parcel locker or parcel shop’.

Figure 6.4 Preferred method of delivery when shopping online



Source: YouGov Reports, *Innovations in Retailing 2016*, fieldwork March 2016

Base: nationally representative adults aged 16+, 2016: 2003. 'Don't know' (7%) responses not shown.

Q15: Now thinking about shopping online (including via your mobile) and the delivery of your purchases, in general which of the following do you prefer?

When asked why they preferred home delivery over 'click and collect', seven in ten adults (71%) said that it was 'more convenient'. This might partly be explained by the fact that one in three adults said that it was difficult to get to the shops or collection point (32%), or that they did not have the time to collect their parcels (27%). Nearly half of the adults who preferred home delivery (44%) said this was perfect for larger or heavier deliveries. Only around one in ten adults mentioned the availability of alerts or tracking (13%) or same-day/within-the hour delivery (7%) as a reason for preferring home delivery.

Over one in ten adults (12%) said they preferred 'click and collect' over home delivery. The most popular reasons for this were the convenience of being able to choose when to collect an order (68%), avoiding delivery charges (44%) and difficulty in arranging a time for home delivery (41%).

Although home delivery remains the most popular, more than a quarter of adults (26%) say they do not like having to wait in for their delivery. Shoppers' habits appear to be driven by their desire for convenience and this might mean something different to each shopper, including home delivery and click and collect.

### Faster delivery options are available

Customers across the UK can now benefit from faster delivery than ever before. Same-day or within-the-hour delivery allows shoppers in certain geographic areas to receive their parcels shortly after placing the order. These services are now available from some online retailers, often at an additional cost.

### Are same-day and within-the-hour the same?

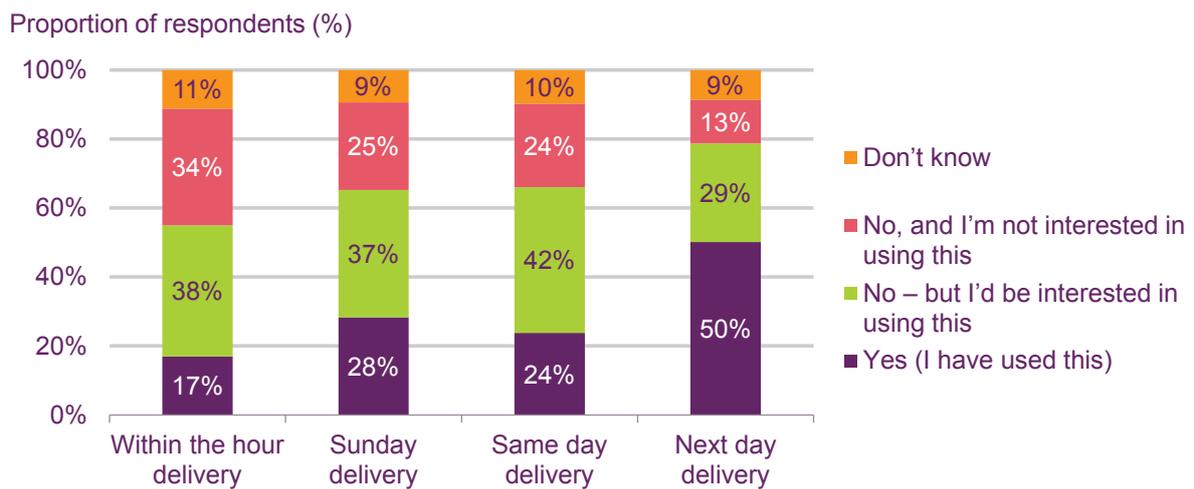
Same-day delivery is when parcels are delivered on the same day that the order was placed. These deliveries often have latest order times earlier in the day to ensure that delivery can be made that day, but tend to be offered on a wider selection of products. Examples include Argos Fast Track delivery, which offers same-day delivery by 10pm for orders placed before 6pm that day, from £3.95, and Amazon Prime. Similar same-day services are offered by retailers including eBay, Schuh and Hotel Chocolat in partnership with Shutl.

Within-the-hour delivery is when parcels are delivered within a few hours of the order, usually within a shorter timescale and smaller geographic area than same-day delivery. One example is Amazon Prime Now, which allows Amazon Prime customers to order a selection of goods for same-day delivery in slots as narrow as one hour. Amazon Prime Now launched in Sheffield - its tenth location - in 2016.

Awareness of faster, or Sunday, delivery options is generally high among adults in the UK. YouGov found that nine in ten adults (89%) were aware that next-day delivery was possible and seven in ten (69%) were aware of same-day delivery. Awareness was lowest for within-the-hour deliveries; only 38% knew that this was possible.

However, reported use of these services tends to be much lower. Fifty per cent of respondents said they had used next-day delivery at some point, and another three in ten (29%) said that they would be interested in using it. But less than one in five adults (17%) said they had used within-the-hour delivery, with four in ten (38%) indicating they would be interested in using it. As these delivery options tend to be charged at a premium, lower use of faster or specified services might result from unwillingness to pay for delivery upgrades.

**Figure 6.5 Use of faster or Sunday delivery options**



Source: YouGov Reports, *Innovations in Retailing 2016*, fieldwork March 2016.

Base: nationally representative adults aged 16+, 2016: 2003.

Q24: Have you ever used, or would you be interested in using same day delivery, within the hour delivery, Sunday delivery, and/or next day delivery?



## 6.2 The postal industry

### 6.2.1 Introduction

This section explores some of the developments and trends in the UK postal sector. It includes information on volumes, revenues, access and end-to-end competition, and letter and parcel prices for Royal Mail's products. It also gives a brief overview of the reasons why letter mail is used (applications) and how this is changing over time.

### 6.2.2 Addressed letter volumes

#### **Addressed letter volumes fell by 3.7% in 2015**

Addressed letter volumes fell again in 2015, and at a faster rate than the previous year. This accelerated rate of decline may be a result of continued switching of mail to other forms of communication. Royal Mail reported that the year-on-year rate of decline for 2015-16 was better than expected; decline was lower than its forecast of between 4% and 6%, primarily due to the return of end-to-end letter volumes following Whistl's exit. Royal Mail expects continued decline in addressed letter volumes in coming years.<sup>106</sup>

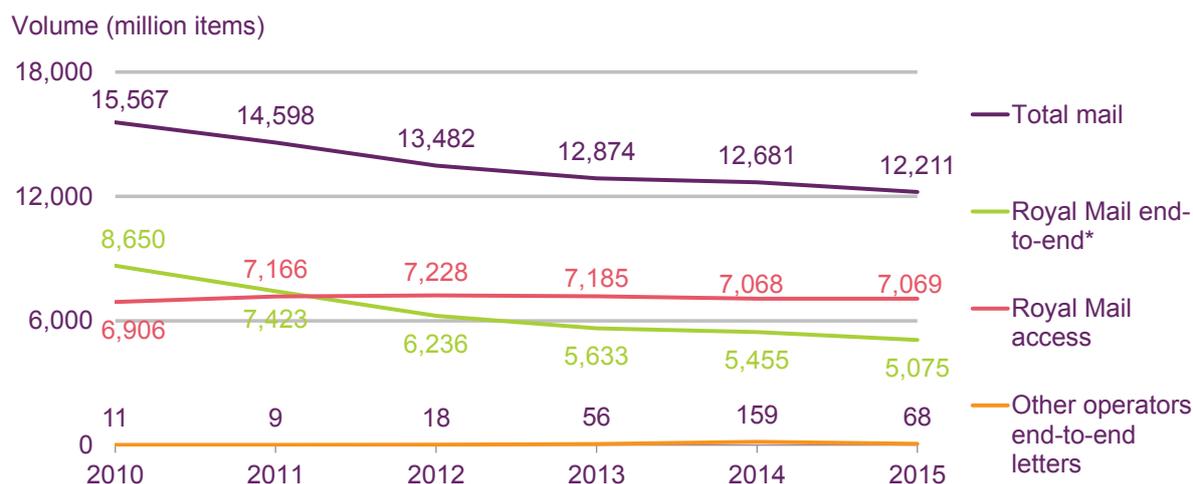
The volume of end-to-end addressed letters handled by Royal Mail fell by 7% to 5.1 billion items. In the five years since 2010, the volume of Royal Mail's end-to-end addressed letters has fallen by over 3.5 billion.

Access volumes slightly increased in 2015 and remain at around 7.1 billion items. This small increase is likely to be driven primarily by the return of some of Whistl's end-to-end volumes to the access market following its exit from the end-to-end letter delivery sector in June 2015.

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<sup>106</sup> See page 32 of Royal Mail's Annual Report and Financial Statements 2015-16, [http://www.royalmailgroup.com/sites/default/files/Annual%20Report%20and%20Accounts%202015-16\\_0.pdf](http://www.royalmailgroup.com/sites/default/files/Annual%20Report%20and%20Accounts%202015-16_0.pdf)

**Figure 6.6 Addressed letter volumes: 2010-2015**



Source: Royal Mail Regulatory Financial Statements, operator returns to Ofcom, Ofcom estimates. Royal Mail calendar year volume figures are derived from Ofcom calculations based on financial year figures in Royal Mail's Regulatory Statements and unaudited submissions to Ofcom and are therefore not directly comparable with Royal Mail's published accounts. Royal Mail figures relate to the 'Reported Business'. \*Royal Mail end-to-end is an Ofcom calculation and refers to Royal Mail total letters volumes excepting access. Royal Mail access volumes are as per its Regulatory Financial Statements and include a small amount of parcels. The effect of this is that Royal Mail's access volumes are slightly overstated and its end-to-end volumes are slightly understated. Earlier data are not comparable.

### 6.2.3 Addressed letter revenues

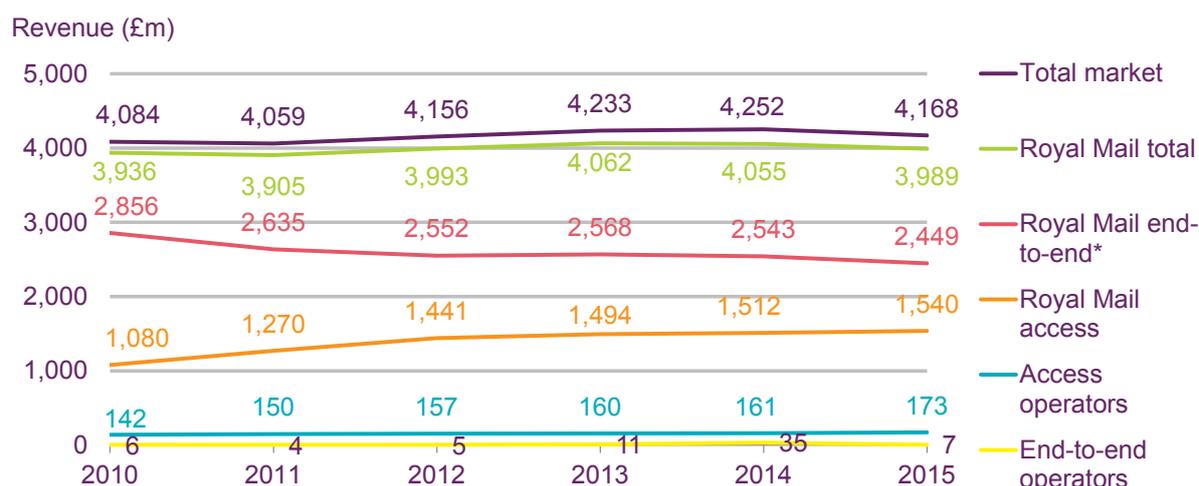
#### Addressed letter revenues fell by 2.0% in 2015

Addressed letter revenues fell by around £83m to around £4.2bn, down by 2.0% in 2015. Royal Mail accounts for the overwhelming majority of the revenue in the addressed letter sector (c. 96%). While the revenues generated by access operators rose by a small amount in 2015, this was not enough to offset the losses from Royal Mail and other end-to-end delivery operators.

Royal Mail's total addressed letter revenues fell by £66m to just below £4.0bn in 2015. This was a result of a decline in end-to-end addressed letter revenues of around £94m (3.7%) to £2.45bn. However, the small increase in Royal Mail's access revenues offset this to some extent, increasing by £28m (0.1%) to £1.54bn.

Access operators generated revenue of £173m in 2015. Other end-to-end operators generated £7m in addressed letter revenues in the same year. We expect other end-to-end operators' letter revenues to decline slightly in 2016, given Whistl's decision in mid-2015 to stop delivering letters.

**Figure 6.7 Addressed letter revenues: 2010-2015**



Source: Royal Mail Regulatory Financial Statements, operator returns to Ofcom, Ofcom estimates. Royal Mail calendar year revenue figures are derived from Ofcom calculations based on financial year figures in Royal Mail's Regulatory Statements and unaudited submissions to Ofcom and are therefore not directly comparable with Royal Mail's published accounts. Royal Mail figures relate to the 'Reported Business'. \*Royal Mail end-to-end is an Ofcom calculation and refers to Royal Mail total letters revenues excepting access. Royal Mail access revenues are as per its Regulatory Financial Statements and include a small amount of parcels. The effect of this is that Royal Mail's access revenues are slightly overstated and its end-to-end revenues are slightly understated. Earlier data are not comparable. Figures are nominal.

### 6.2.4 Addressed letter competition

Within the postal sector, there are two main forms of competition: end-to-end and access. Access has been the predominant form of competition since the first access contract was signed in 2004.

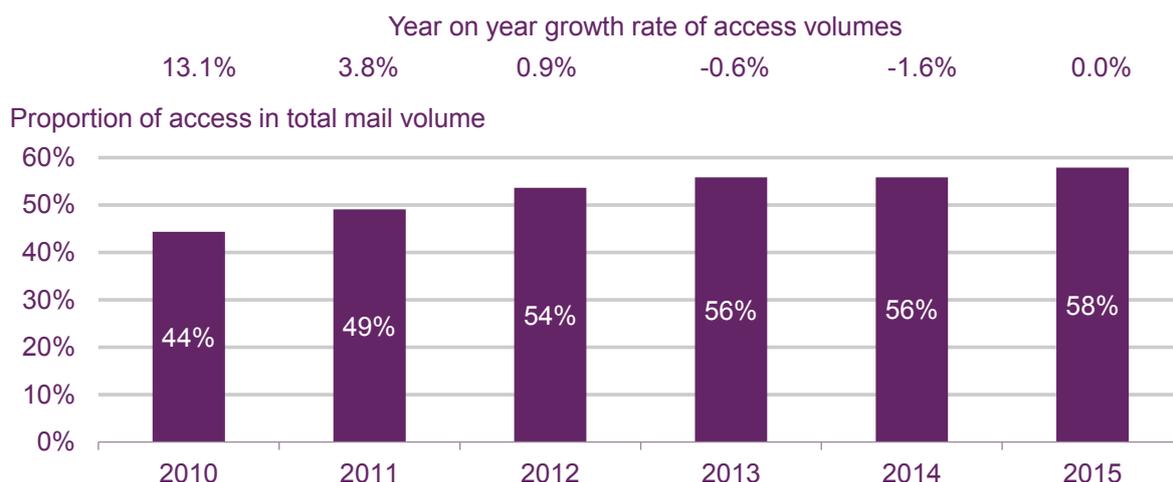
End-to-end competition is where mail is collected, sorted and delivered by an operator other than Royal Mail. There are currently no other national end-to-end postal operators, although there are a number of smaller operators delivering in specific geographic areas.

Access competition is where the collection and sortation is handled by an alternative operator which then transports it to Royal Mail's inward mail centres. From here, Royal Mail delivers the mail to the intended recipient. Royal Mail is subject to a regulatory condition requiring it to offer access to other operators for letters and large letters at its inward mail centres. This enables other operators to offer letter postal services to business customers without the need to establish a national delivery network.

#### Access mail now makes up 58% of total letter volumes

Access mail volumes increased very slightly this year (by less than 0.1%). However, the shrinking volumes of the total addressed letters sector means that the proportion of access in total mail increased to 58% - nearly six in every ten addressed letters are now handled by an operator other than Royal Mail. This is the first rise in the volume of access mail since 2012, and may be due to Whistl stopping its end-to-end letter delivery operations.

**Figure 6.8 Proportion of access in total letters mail: 2010-2015**



Source: Royal Mail Regulatory Financial Statements, Operators' returns, Ofcom estimates

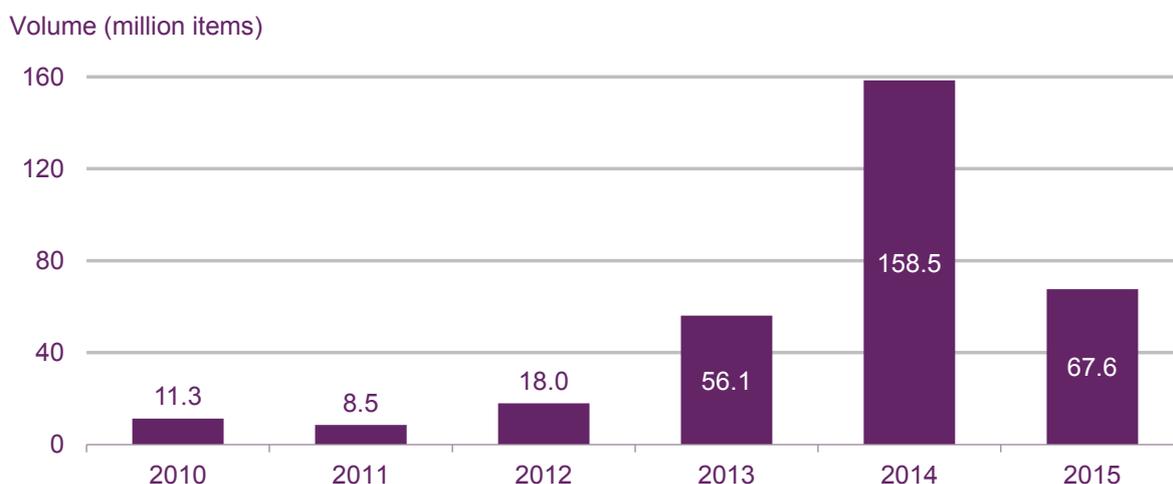
**Operators other than Royal Mail delivered 68 million items in 2015**

Operators other than Royal Mail also deliver letters end-to-end in some parts of the UK. In 2015, other operators were responsible for the end-to-end delivery of 68 million addressed letters. This represents around six in every thousand letters delivered across the UK.

The volume of letters delivered end-to-end by operators other than Royal Mail in 2015 fell by around 91 million since the previous year, representing a year-on-year decline of 57%. This was driven predominantly by Whistl's withdrawal from end-to-end letter delivery services in June 2015, from its peak of 158.5 million items in 2014. All other things being equal, we would expect end-to-end letter volumes to reduce again in 2016 as an ongoing effect of Whistl's decision.

Excluding Whistl, letter volumes delivered by other end-to-end operators were broadly stable throughout 2015. Cycle-based operators Velopost (which delivers in Bristol, Bath and Edinburgh) and Yellow Jersey Delivery (Coventry) have had the largest proportional increases in volumes over the year. In 2015, Velopost began to offer its delivery services to individual users through stamps and access points in local shops.

**Figure 6.9 Other operators' end-to-end delivered volumes: 2010-2015**



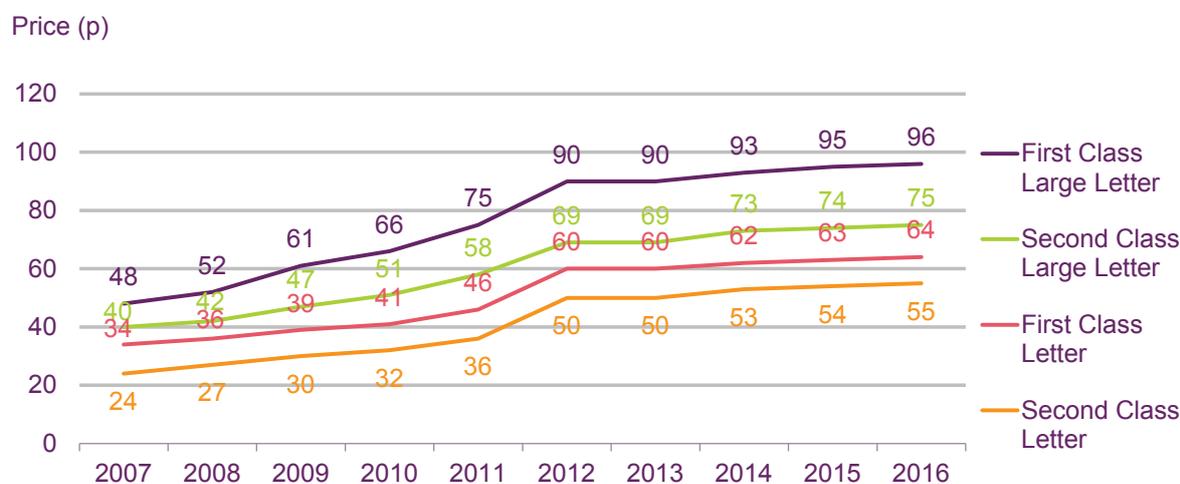
Source: Ofcom analysis of operators' returns

## 6.2.5 Letter and parcel single-piece prices

### Stamp prices increased in 2016 for the third consecutive year

Stamp prices for letters and large letters went up at the end of March 2016. Prices for First Class and Second Class letters and large letters went up by 1p. A First Class stamp now costs 64p and a Second Class stamp now costs 55p.

**Figure 6.10 Royal Mail First and Second Class single-piece stamp prices: 2007-2016**



Source: Royal Mail. Figures are nominal. Prices refer to Royal Mail First and Second Class Standard and Large Letter list prices for letters up to 100g.

### Royal Mail increased the prices of its First and Second Class small and medium parcels paid for over the counter, but froze online prices

From the end of March 2016, Royal Mail increased the prices of its First and Second Class small and medium parcels when bought over the counter. To send a Second Class small parcel now costs £2.85 and to send a Second Class medium parcel costs £4.95. Royal Mail reduced the price of its Second Class medium parcel by 31p in 2015 but introduced a 6p increase in 2016.

Royal Mail now offers a different price for parcel postage when bought online.<sup>107</sup> First and Second Class small and medium parcels bought online did not increase in price between 2015 and 2016. To send a Second Class small parcel with postage bought online costs £2.80.

Ofcom has conducted analysis on the prices of next-day and later-than-next-day parcel services from alternative providers as part of its *Review of the Regulation of Royal Mail*. These can be found in Annex 8 of the consultation document on our website.<sup>108</sup>

<sup>107</sup> The online price is available for postage purchased through Royal Mail Online Postage, Royal Mail Click & Drop and partner online channels including eBay Online Postage, PayPal and Amazon).

<sup>108</sup> See pages 100 and 101 of Annex 8 of the document *Review of the Regulation of Royal Mail*, <http://stakeholders.ofcom.org.uk/binaries/consultations/royal-mail-review/annexes/Annexes-5-11.pdf>

**Figure 6.11 Royal Mail First and Second Class small and medium parcel prices: 2013-2016**



Source: Royal Mail. Figures are nominal. Prices refer to Small Parcels (up to 45cm x 35cm x 16cm) weighing up to 1kg and Medium Parcels (up to 61cmx46cmx46cm) weighing up to 1kg. Note: In 2016, Royal Mail introduced a different price for parcel postage bought online rather than in-store. Dashed line shows online prices.

### Royal Mail offers lower prices to business customers

Royal Mail is able to offer discounted prices to some of its larger senders of mail. Customers with a franking machine or with an online business account with Royal Mail can send Second Class letters from as little as 37p.

Senders of bulk mail also qualify for discounts, based on the number of letters they send, or the way they present their mail. Different prices are available based on the type of mail that is being sent, including advertising mail and publishing mail.

Royal Mail publishes a business price guide on its website with further information.<sup>109</sup>

### 6.2.6 Uses of mail in industry

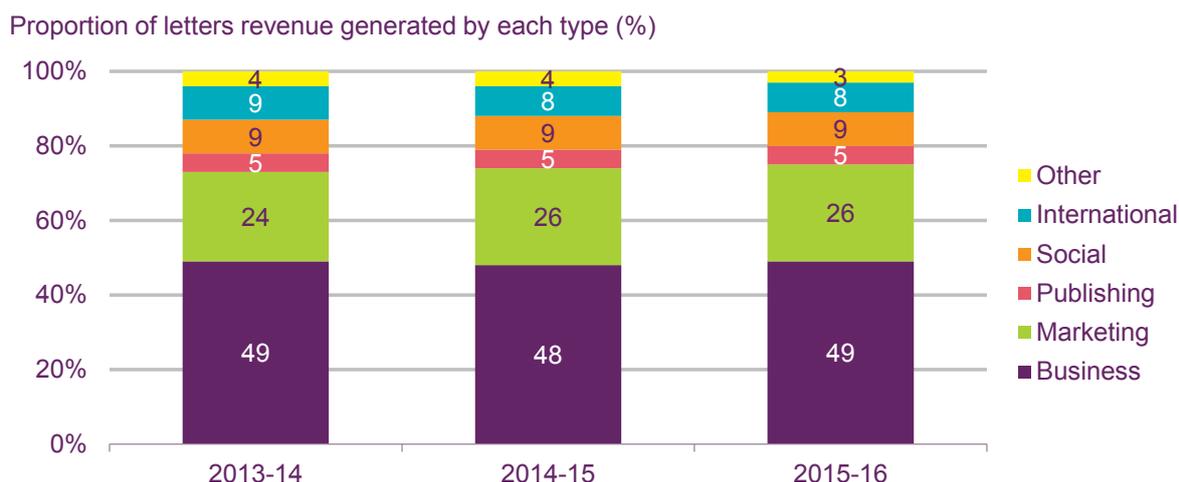
#### Three-quarters of letter revenue comes from business and marketing mail, and less than a tenth from personal letters

The proportions of letter revenue by application have remained fairly stable for a number of years, as shown in Figure 6.12. Business mail, which is primarily made up of transactional mail such as bills or statements, accounts for nearly half (49%) of all letter revenue. Marketing mail, which includes addressed advertising, accounts for 26% of all letter revenue.

Social mail, which is made up of letters sent between consumers, makes up just under one in every ten letters (9%) by revenue. But as social mail is generally sent with stamps, which cost more per item than bulk mail, we expect that social mail will make up a smaller proportion of total mail by volume.

<sup>109</sup> [http://www.royalmail.com/sites/default/files/RM\\_Business\\_Price\\_Guide\\_Mar\\_2016\\_ENG\\_V8.pdf](http://www.royalmail.com/sites/default/files/RM_Business_Price_Guide_Mar_2016_ENG_V8.pdf)

**Figure 6.12 Letter revenue, by type of mail: 2013-14-2015-16**



Source: Royal Mail plc, full year 2015-16 results, Royal Mail plc, full year 2014-15 results, and Royal Mail plc, full year 2013-14 results.

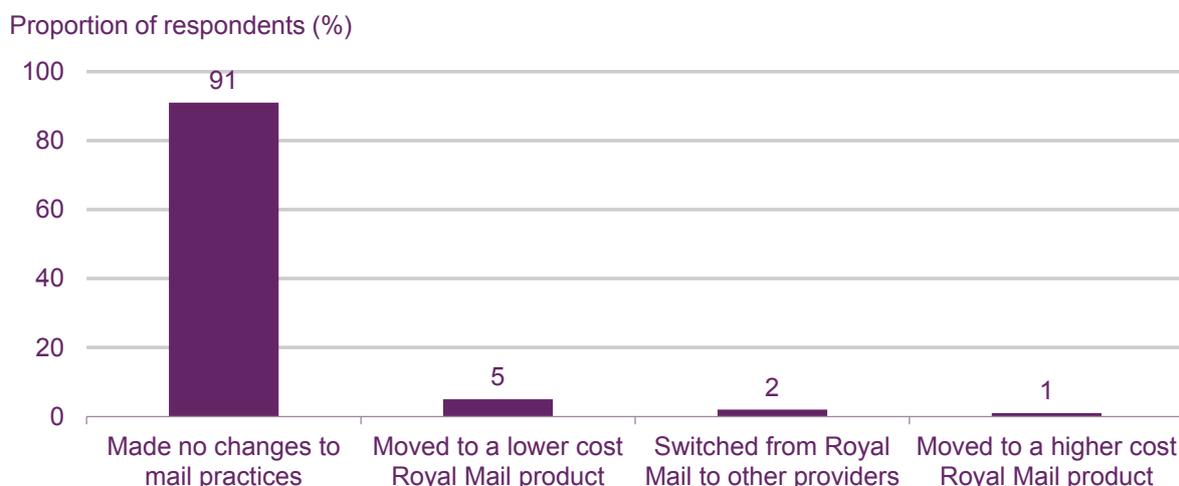
Note: relates to Royal Mail revenue and not the total market, so accounts for c.95% of total revenue

### Nine in ten businesses have not changed their mail practices in the past year

As part of Ofcom's *Business Postal Tracker* survey, small and medium businesses were asked whether their mailing habits had changed in the past 12 months. Nine in ten businesses (91%) who used Royal Mail services said they had made no changes to their mail practices. One in twenty businesses (5%) said that they had moved from higher-cost to lower-cost Royal Mail products. Only 2% of respondents said they had switched away from Royal Mail to another service provider.

Businesses which said they regularly fulfilled orders using mail were the most likely to say they had switched to a lower-cost Royal Mail product or to another provider.

**Figure 6.13 Businesses' changes in mail practices over the past year**



Source: Ofcom *Business Postal Tracker 2015*

Base: All respondents using Royal Mail services (n=1185)

QV7a: In the last 12 months, has your organisation...

## Spend on direct mail advertising increased in 2015 for the first time in five years

As shown in Figure 6.14, advertisers spent just over £1.5bn on direct mail advertising in the UK in 2015. Spend on direct mail rose by 3.6% compared to 2014. These figures represent spend on the production and postage of direct mail advertising.

The proportion of total advertising spend accounted for by direct mail also increased in 2015, up by 0.2pp on 2014. This means that direct mail accounted for a similar proportion of total spend as in 2013.

**Figure 6.14 UK direct mail advertising spend and share of total advertising: 2010-2015**



Source: AA/Warc Advertising Expenditure report. Figures are nominal

## The volume of consumer magazine subscriptions, typically sent and delivered by post, fell by 7% year on year

The average circulation for consumer magazines fell from 4.8 million in 2014 to 4.4 million in 2015. This is a further year of decline in average circulation figures. However, the share of total print circulation that was made up of subscriptions rose to 15.2%. This suggests that the decline in total circulation was greater than that of subscription sales overall.

**Figure 6.15 Magazine subscription circulation: 2011-2015**



Source: Mediatel/ABC, 6-monthly average circulation and subscription sales

## 6.3 People's use of post

### 6.3.1 Introduction

This section presents some of the highlights of Ofcom's research into consumers' use of, and attitudes towards, postal services in the UK. The data presented here are sourced primarily from Ofcom's *Residential Postal Tracker* which has been running since July 2012.

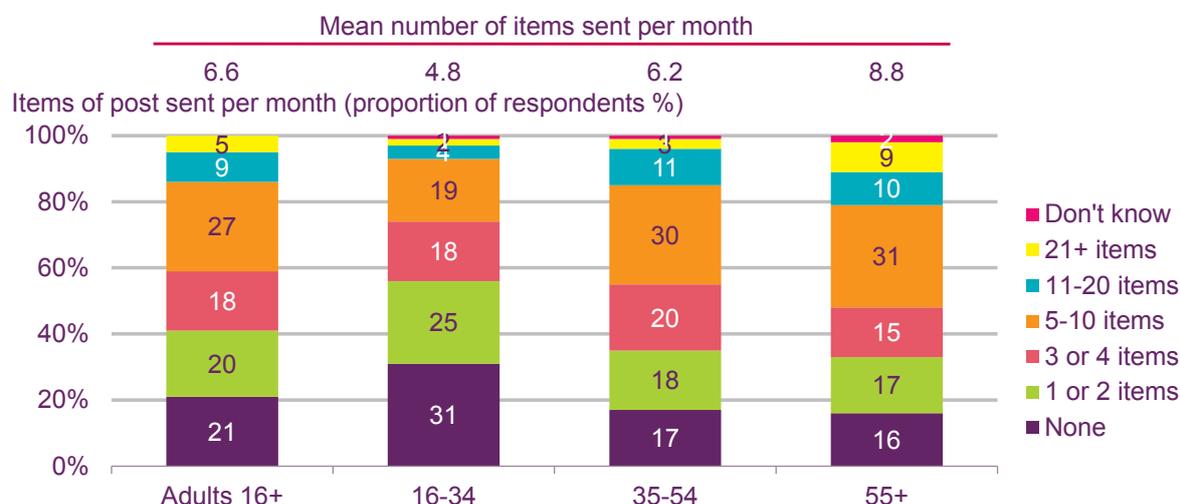
### 6.3.2 Sending post

#### One in five adults had not sent any items of post in the past month

The majority of adults (79%) had sent some post in the past month, with just over a quarter (27%) sending between five and ten items.

The average number of items sent per month is 6.6, but this is reportedly much lower for those aged 16-34, as shown in Figure 6.16. The younger age group are the most likely to have sent no items, with almost a third (31%) saying they had not sent an item of post in the past month. This is almost double the proportion of respondents (16%) aged 55+ who said this. Nearly one in five (19%) of those aged 55+ said they had sent more than 11 items of post in the past month.

**Figure 6.16** Number of items sent per month



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1946, 636 16-34, 675 35-54, 636 55+)

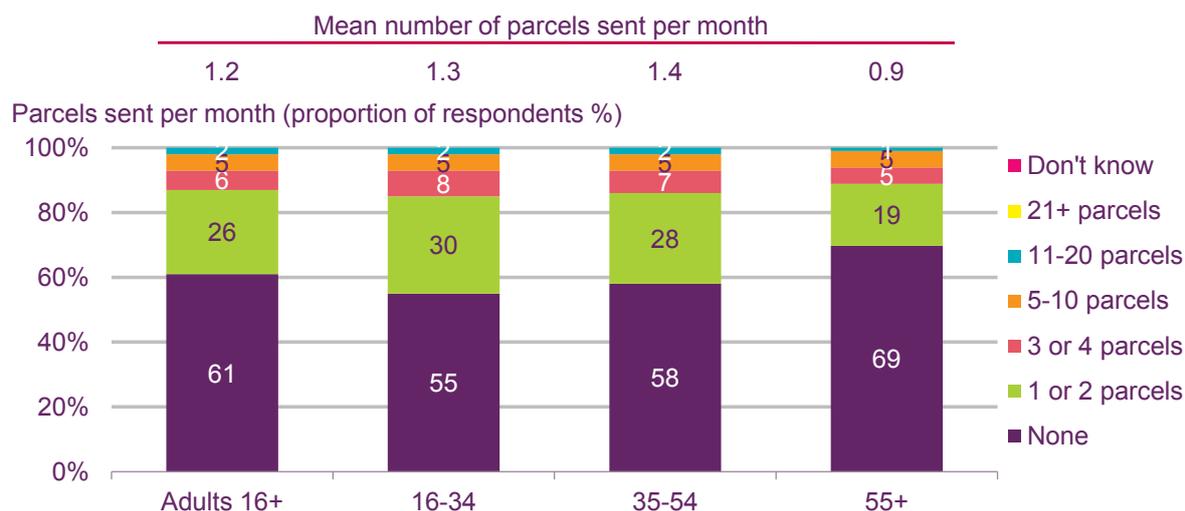
QC1. Approximately how many items of post – including letters, cards and parcels – have you personally sent in the last month?

#### Over-55s are the most likely to say they send no parcels each month

Over-55s are the age group least likely to send parcels, with nearly seven in ten (69%) saying that they had not sent a parcel in the past month, and two in ten (19%) saying that they had sent between one and two parcels in the past month. These are the highest and lowest proportions across all age groups.

On average, UK adults send 1.2 parcels each month. A slightly higher number are sent by 35-54s than by 16-34s and over-55s. This may be a result of returned parcels, generated by ordering items for delivery through the post, as those aged 35-54 were the age group most likely (49%) to say they had returned goods they had had delivered.

**Figure 6.17 Number of parcels sent each month**



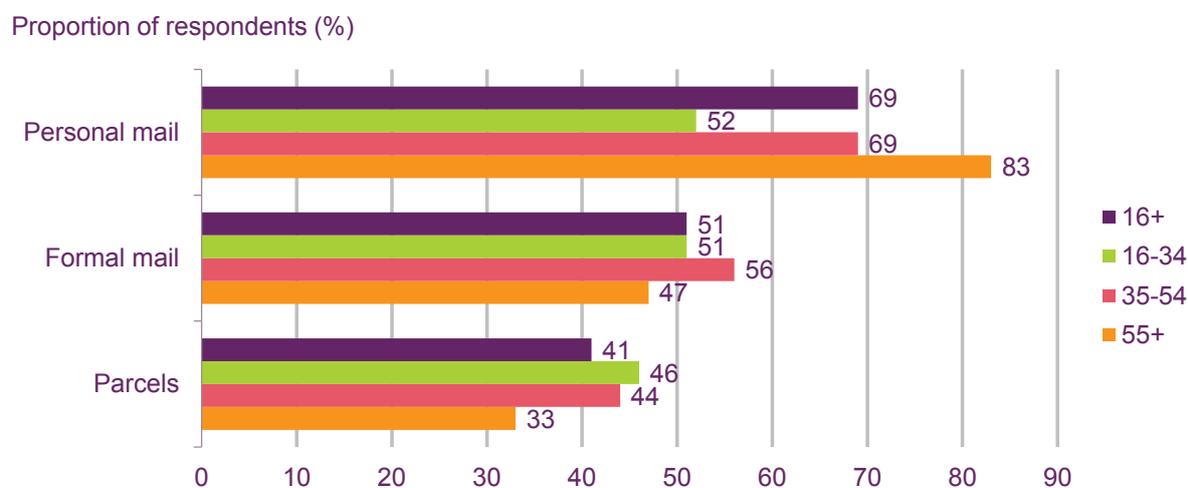
Source: Ofcom Residential Postal Tracker 2015

Base: All adults who have personally sent any items of post in the last month (n = 1491 adults 16+, 364 16-34, 536 35-54, 591 55+) QC2. And how many of these items sent in the last month were parcels rather than letters or cards?

### Adults in the UK say they send more personal mail than any other type of mail

Seven in ten adults (69%) said they had sent an item of personal mail such as a greetings card or letter to a friend or relative in the past month. Those aged 55+ were the most likely to have sent an item of personal mail in the past month (83%) but the least likely to say that they had sent a parcel over the same period of time (33%). Those aged 16-34 were the least likely (at 52%) to say they had sent an item of personal mail, perhaps owing to the popularity of social media and digital messaging for this age group (see section 1.4). Half of all adults (51%) said they had sent an item of formal mail such as a letter to an organisation in the past month, with no significant differences by age group.

**Figure 6.18 Types of mail sent in the past month**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults who have personally sent any items of post in the last month (n = 1491 adults 16+, 364 16-34, 536 35-54, 591 55+) QC5. Which of these types of mail would you say you have personally sent in the last month by post? (multicode)

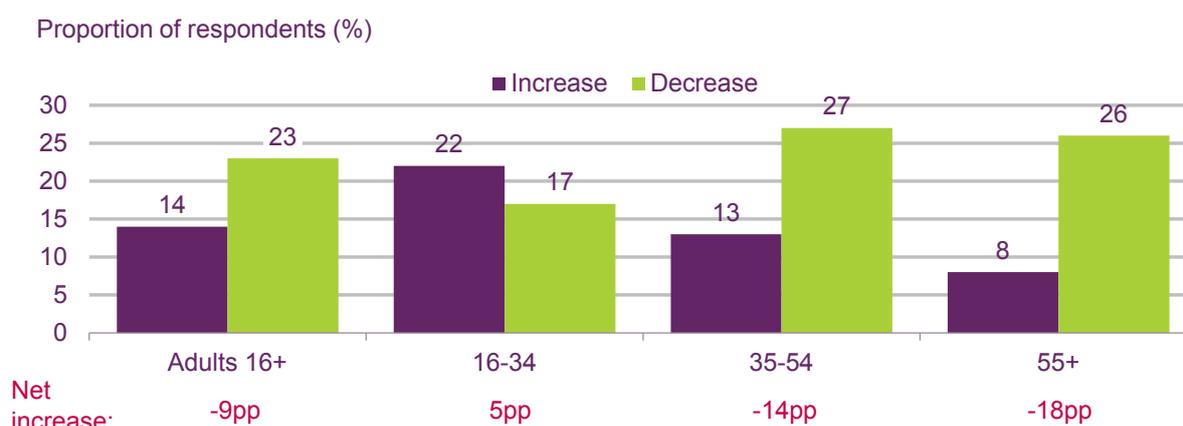
## One in five adults say that they are sending fewer items of post than two years ago

When asked about their use of postal services now, compared to two years ago, one in five (23%) adults said there had been a decrease in the items they sent, whereas just over one in ten (14%) said they had sent more items. The net decrease for all adults was 9pp. The biggest net decrease was reported by adults aged 35-54 and 55+.

For those aged 16-34, there was a net increase of 5pp, with two in ten (22%) adults in this age group saying they sent more items now than two years previously. Our research might help to explain this. When those who said they were sending more items of post now compared to two years ago were asked which types of mail they were now sending more of, 16-34s reported sending more larger parcels (59%) and formal letters (40%). A possible explanation is that 16-34s (who commonly shop online) are sending more parcels now than two years ago as they are more frequently returning items. For formal mail, it is possible that as respondents move into universities or employment and beyond, they have to correspond more frequently with companies and banks.

We also asked those who said they now send fewer items of post, which types of mail they are sending less of. Invitations, greetings cards and postcards were the option selected most often, by all age groups (48%). Other items that are sent less frequently include larger parcels (28%) and formal letters to organisations or individuals (27%). Over-55s were the most likely to say they were sending fewer invitations, greetings cards and postcards, with six in ten (62%) respondents selecting this option.

**Figure 6.19 Adults' increasing or decreasing use of post compared to two years ago**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+, (n = 1946 adults 16+, 636 16-34, 675 35-54, 636 55+)

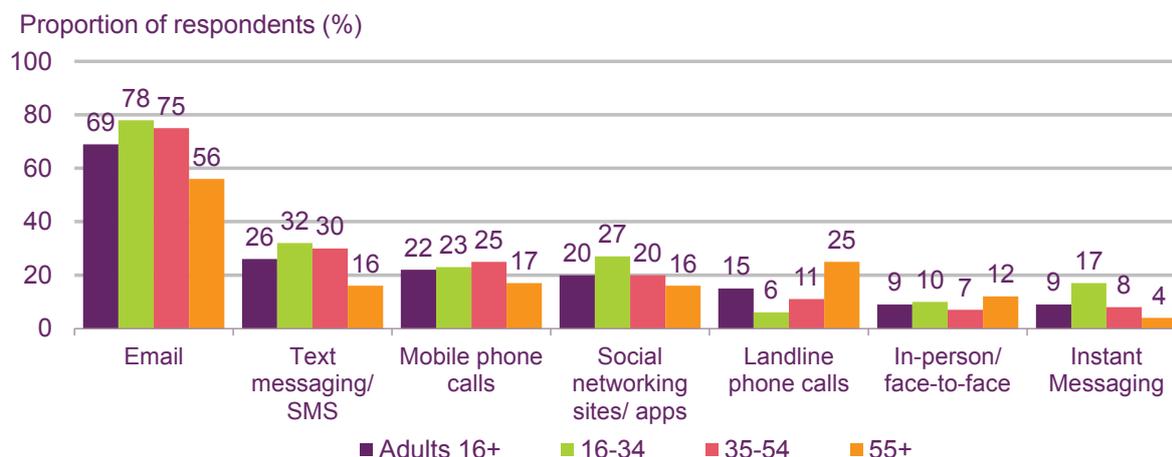
QC10. [showcard] Compared with two years ago, would you say that the number of items you send through the post has... increased greatly, increased slightly, stayed the same, decreased slightly, decreased greatly?

## Email remains the most popular form of communication used as a replacement for post

Adults who said they were sending fewer items of post now compared to two years ago were asked which forms of communication they were using as a replacement. Among all adults, email was the most commonly selected option; seven in ten (69%) adults selected this. Text messaging (26%) and mobile phone calls (22%) were other commonly-selected methods of communication used instead of post.

Over-55s were the least likely (at 56%) to say that they had replaced post with email communication. They were the group most likely to say they had replaced post with landline phone calls; 25% of adults in this age group chose this option.

**Figure 6.20 Methods of communication used as a replacement for post**



Source: Ofcom Residential Postal Tracker 2015

Base: All who say that the number of items sent by post has decreased, compared to two years ago (n = 455 adults 16+, 103 16-34, 190 35-54, 203 55+)

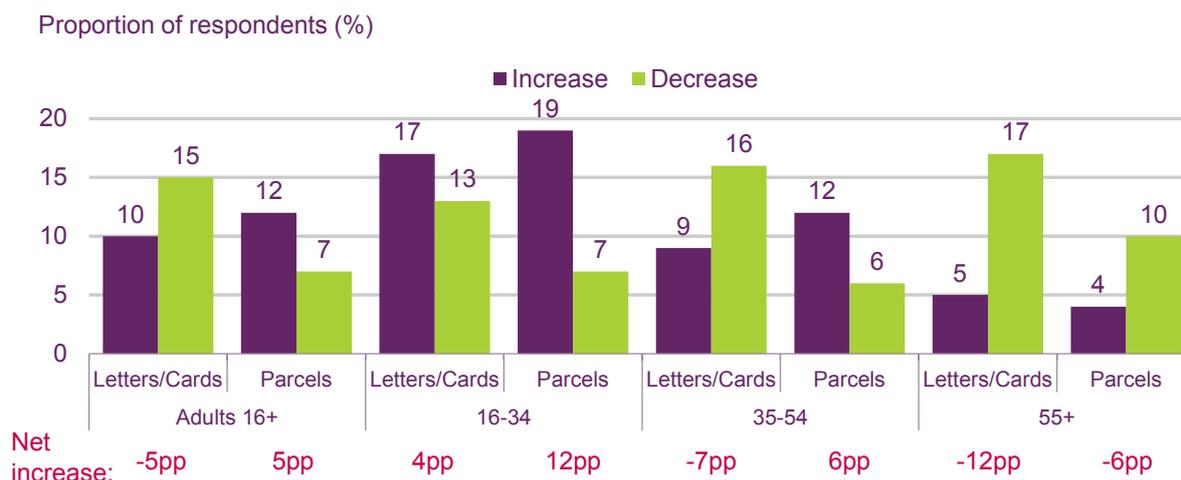
QC13. As your use of post has decreased compared with two years ago, which, if any, of these other forms of communication are you using more instead of post? (MULTICODE). Only responses above 5pc charted.

### Some adults in the UK expect to be sending fewer letters, but more parcels, in two years' time

Adults were also asked what they expected their use of post might look like in two years' time. Overall, most adults in the UK (72%) believed there would be no change in their habits. Fifteen per cent thought there would be a decrease in their use of letters and cards, while only 10% thought there would be an increase. However, the reverse was true with parcels: 12% said they expected to be sending more parcels, while 7% said they expected to be sending fewer.

Those aged 16-34 said they expected to be sending more letters, cards and parcels, with almost one in five (19%) saying they expected to be sending more parcels. Among over-55s, 17% said they expected to be sending fewer letters and cards, and 10% thought they would be sending fewer parcels.

**Figure 6.21 Expected use of post in two years' time**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1946 adults, 636 16-34, 675 35-54, 636 55+)

QC25 and 26. SHOWCARD Looking to the future... Compared with now, would you say that the number of letters and cards/parcels you will be sending in the post two years from now will have... increased greatly, increased slightly, stayed the same, decreased slightly, decreased greatly?

### 6.3.3 Receiving post

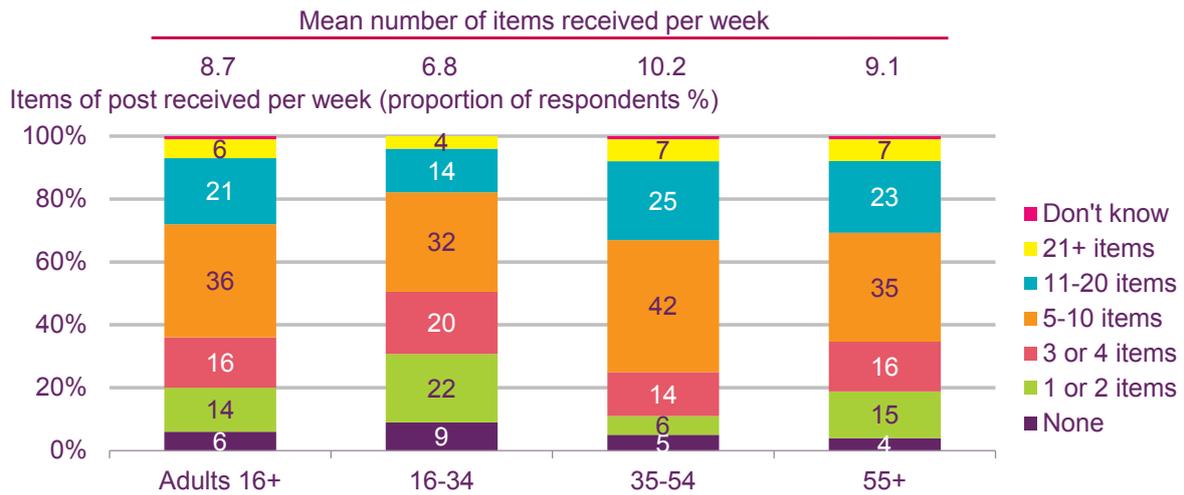
#### Nearly all adults said they had received some mail in the past week

A large majority of adults (93%) said that they had received some mail in the past week. More than a third of adults (36%) said they had received between five and ten items, while 27% had received more than 11 items in the past week.

Those in the 16-34 age group are generally the least likely to say they receive mail. Almost one in ten (9%) in this age group said they had received no mail at all, and around one in five (22%) said they had received only one or two items. About two in five adults (42%) in the 35-54 age group said they had received between five and ten items per week; this was the highest among all age groups for this quantity of mail.

This pattern can also be seen in the average number of items received per week. Adults in the 16-34 age group said they received only 6.8 items per week on average, compared to 10.2 items for adults aged 35-54, and the UK average of 8.7 items.

**Figure 6.22 Number of items received per week**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1946 adults, 636 16-34, 675 35-54, 636 55+)

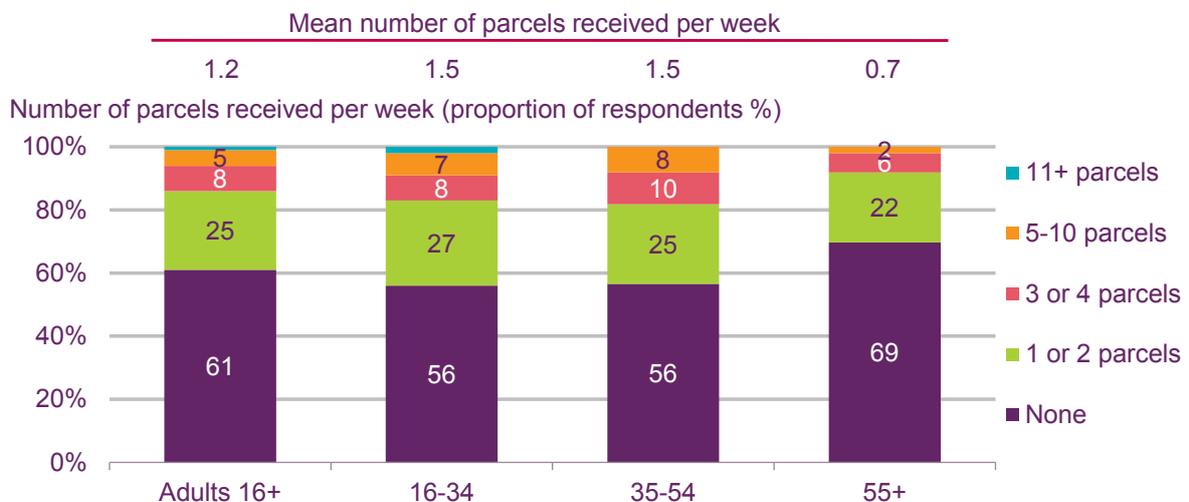
QD1. Approximately how many items of post, including letters, cards and parcels, have you personally received in the last week?

**Six in ten adults say that they have not received a parcel in the past week**

Adults who said they had received some mail in the past week were asked how many of the items received had been parcels. Six in ten (61%) adults said that they hadn't received any parcels in the past week, while 25% had received between one and two parcels. The average number of parcels received each week, for all adults, was 1.2.

Over-55s were the most likely to say they had not received a parcel in the past week, at 69%. This group received an average of 0.7 parcels per week, lower than the other age groups

**Figure 6.23 Number of parcels received per week**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults who have personally received any items of post in the past week (n = 1824 adults, 500 16-34, 628 35-54, 696 55+)

QD2. And how many of these items received in the last week were parcels rather than letters or cards?

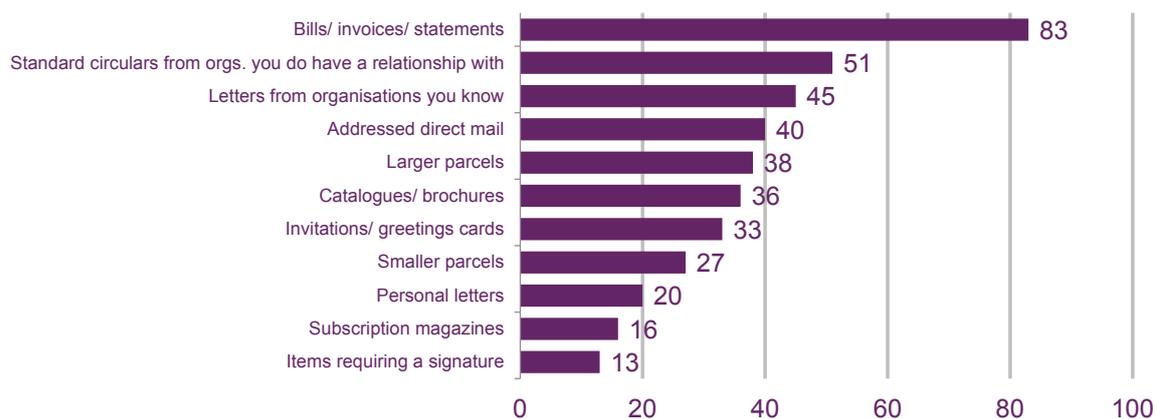
## Bills, invoices and statements are the items most commonly received by post

Adults in the UK were asked about what types of addressed mail (excluding leaflets or charity collection items) they had received in the past month. More than four in five (83%) adults said they had received a 'bill, invoice or statement' in the past month. Other commonly received items included 'standard circulars from organisations you have a relationship with' (51%), 'letters from organisations you know' (45%) and 'addressed direct mail' (40%).

A high proportion of the mail received by respondents was from businesses rather than individuals. A third (33%) of adults reported receiving 'invitations or greetings cards or postcards' and 20% said they had received a 'personal letter (e.g. from a friend)'. This might reflect the trend towards digital messaging and social media as a platform for personal communications.

**Figure 6.24** Types of mail received in the past month

Proportion of respondents who have received each type of mail (%)



Source: Ofcom Residential Postal Tracker 2015

Base: all adults aged 16+ (n = 1946 adults)

QD4. Please think about items that are addressed to you personally rather than leaflets or charity collection envelopes or bags that may come through your letterbox. Which of these types of items would you say you have personally received through the post in the last month? (MULTICODE)

## Nearly half of all adults have had deliveries from providers other than Royal Mail

Adults in the survey were asked which providers had delivered their parcels in the past week. Nearly three-quarters of respondents (72%) said they had received at least one parcel from Royal Mail, the most commonly reported provider by a significant margin. However, 47% of adults who had received parcels in the past week said they had received at least one parcel from a provider other than Royal Mail.

Overall, awareness of alternative providers is high. Nearly three-quarters of adults had heard of DHL (73%) or FedEx (73%), and around six in ten people had heard of TNT Express (64%), Yodel (61%) or UPS (59%).

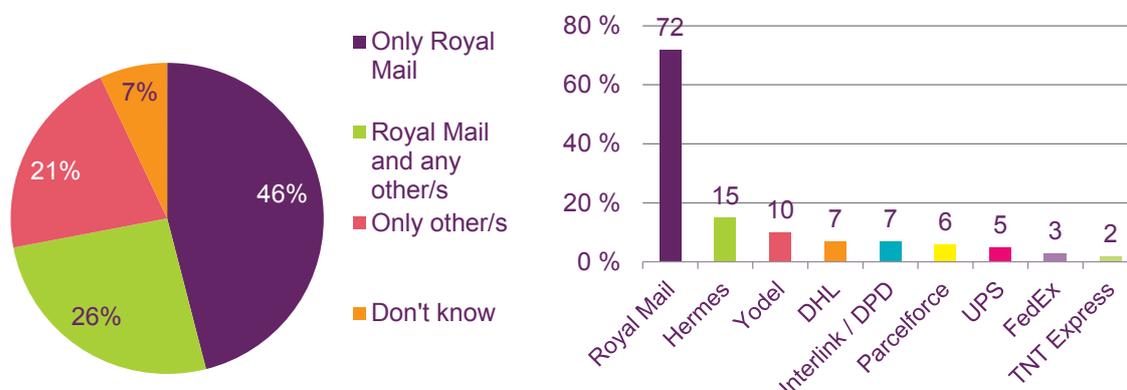
However, the use of alternative providers to send or receive an item is lower. Less than three in ten (28%) said they had used Yodel to send or receive an item of mail at some point, and a similar number of respondents (27%) said they had used Hermes to send or receive an item of mail.

As mentioned in our recent consultation, the *Review of the Regulation of Royal Mail*, consumers' awareness of alternative providers may be greater if they have had parcels

delivered by these providers. The comparatively low use of alternative providers to send or receive an item may be due to lower consumer awareness of the single-piece parcel services for consumers that are offered by alternative providers.<sup>110</sup> For example, awareness of Yodel is higher than that of Collect+; the latter is a joint venture between Yodel and PayPoint and effectively functions as Yodel's equivalent to the Post Office.

**Figure 6.25 Proportion of adults reporting delivery of parcels in the last week, by company**

Proportion of those who have received a parcel in the past week (%)



Source: Ofcom Residential Postal Tracker 2015

Base: All adults who have received any parcels in the last week (n= 678)

QD17. Thinking of the parcels that you have received in the last week, which of these companies delivered the parcels? (multicode)

Chart shows companies mentioned by more than 1% of those receiving any parcels in the last week. Amazon Logistics was not included as an option in the survey.

### 6.3.4 Awareness of and attitudes to postal services

#### Less than one in ten adults know the price of a First or Second Class stamp

Adults in the survey were asked if they knew the prices of First and Second Class stamps offered by Royal Mail. Less than one in ten (7%) adults could correctly state the price of a First Class Stamp. Even fewer adults (4%) knew the price of a Second Class stamp.<sup>111</sup>

Adults aged 35-54 were the most likely to give an incorrect answer that was lower than the correct price. Two-thirds of adults in this age group (66%) gave a price that was below 63p for a First Class stamp, and more than two in five (44%) stated a price below 54p for a Second Class stamp.

<sup>110</sup> See paragraph 5.24 of section 5 of the document *Review of the Regulation of Royal Mail*, <http://stakeholders.ofcom.org.uk/binaries/consultations/royal-mail-review/summary/Review-of-Royal-Mail-Regulation.pdf>

<sup>111</sup> A First Class stamp was 63p and a Second Class stamp was 54p at the time of interviewing.

**Figure 6.26 Awareness of letter stamp prices**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1358 adults, 389 16-34, 465 35-54, 504 55+)

QF1. As far as you know, how much does it currently cost to send a standard letter by First Class using a stamp? (single code)

QF2. As far as you know, how much does it currently cost to send a standard letter by Second Class using a stamp? (single code)

Note: Chart includes data from Q2 2015 onwards, due to a change in stamp prices during Q1 2015

**A majority of adults say that First and Second Class stamps are good value for money**

Having been told the correct prices, six in ten (60%) adults said that 63p represented ‘very good’ or ‘fairly good’ value for money for a First Class stamp. This was slightly lower with Second Class stamps; 51% of adults thought that 54p represented either ‘very good’ or ‘fairly good’ value for money.

**Figure 6.27 Perception of value for money of First and Second Class stamps**



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1358 adults)

QF3/4. It currently costs 63p/54p to send a standard letter First/ Second Class within the UK. How would you rate the Royal Mail's First/ Second Class service in terms of value for money? (single code)

Note: Chart includes data from Q2 2015 onwards, due to a change in stamp prices during Q1 2015

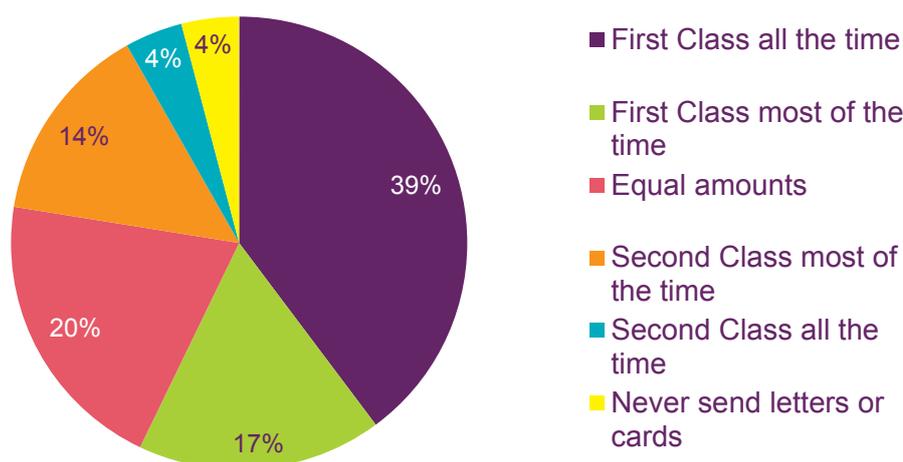
## Speed of delivery is a key factor when choosing a service

Nearly four in ten (39%) adults said they used First Class all the time when sending letters or cards. This was nearly ten times more than those who said they used Second Class all the time (4%). A small majority (51%) of adults said they used a mixture of First and Second Class when sending letters and cards.

Among those who said they used First Class postage all or most of the time, more than eight in ten (85%) said it was because of the 'speed of delivery'. The next highest answer was that First Class postage was 'what stamps I have to hand' (16%); 'cost of postage' was selected by less than one in ten (7%). Nearly half (45%) of adults who use Second Class equally, or all or most of the time, said their decision was influenced by 'the cost of postage' or the 'speed of delivery'.

**Figure 6.28 Service used when sending letters or cards**

Proportion of respondents (%)



Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n=1946)

QF6: When sending letters or cards, which service do you use? 'Don't know' responses not charted.

## Attitudes to the postal service vary by age

Overall, 59% of adults say they are 'very reliant' or 'fairly reliant' on letters and cards as a way of communicating. However, younger adults are the most likely to say the opposite; over a third of adults aged 16-34 (36%) say they are either 'not very reliant' or 'not at all reliant'. Further, adults in the 16-34 age group are the least likely to agree with the statement 'I would feel cut off from society if I can't send or don't receive post' with more than four in ten (44%) saying they 'slightly agree' or 'strongly agree'. In contrast, nearly seven in ten (68%) of adults aged 55+ say they 'slightly agree' or 'strongly agree' with the statement.

Younger adults are more likely to favour digital alternatives to post. Adults in the 16-34 age group are the most likely to say that they prefer to send emails rather than letters; 71% of adults in this age group agree with this statement, compared to 37% of over-55s. More than half of over-55s (53%) say they 'slightly disagree' or 'strongly disagree' with the statement 'I only use post if there is no alternative'. This compares to just 26% of 16-34s.

When asked about statements relating to the speed and cost of postal services, almost a third of adults (29%) agreed with the statement 'I send fewer letters by post now due to the cost'. More than half of adults (52%) disagreed with this statement. Nearly three-quarters of

adults aged 55+ (72%) said that they agreed with the statement 'I trust Second Class post to get there in a reasonable timeframe' - higher than the other age groups.

**Figure 6.29 Attitudes to post among adults in the UK: agreement with proposed statements**

|  | Adults 16+ | 16-34 | 35-54 | 55+  |
|--|------------|-------|-------|------|
| I prefer to send letters or emails to companies rather than make a phone call, so that I have a written record | 60         | 61    | 64    | 55   |
| I prefer to send emails rather than letters whenever possible  | 56         | 71 ▲  | 60    | 37   |
| I only use post if there is no alternative   | 47         | 61 ▲  | 44    | 37   |
| I send fewer letters by post now due to the cost   | 29         | 26    | 30    | 32   |
| I would feel cut off from society if I can't send or don't receive post  | 55         | 44    | 55    | 68 ▲ |
| I trust Second Class post to get there in a reasonable timeframe   | 63         | 58    | 60    | 72 ▲ |

Source: Ofcom Residential Postal Tracker 2015

Base: All adults aged 16+ (n = 1946 adults, 557 16-34, 662 35-54, 727 55+)

QH2B-H. Agreement with statements about sending/receiving post

Significance testing - arrows show any difference between age groups.





# The Communications Market 2016

## **7 Glossary & Table of Figures**

# Glossary

**2G** Second generation of mobile telephony systems. Uses digital transmission to support voice, low-speed data communications, and short messaging services.

**3G** Third generation of mobile systems. Provides high-speed data transmission and supports multimedia applications such as full-motion video, video-conferencing and internet access, alongside conventional voice services.

**4G** The fourth generation of mobile phone mobile communication technology standards, which provides faster mobile data speeds than the 3G standards that it succeeds.

**Access** Allowing other companies operating in the postal market, or other users of postal services, to use Royal Mail's facilities for the partial provision of a postal service.

**Access network** An electronic communications network which connects end-users to a service provider; running from the end-user's premises to a local access node and supporting the provision of access-based services. It is sometimes referred to as the 'local loop' or 'last mile'.

**Active audience** The total number of people who visited any website or used any internet connected application at least once in a given month.

**ADSL** Asymmetric digital subscriber line. A digital technology that allows the use of a standard telephone line to provide high-speed data communications. Allows higher speeds in one direction (towards the customer) than the other.

**ADSL2+** A technology which extends the maximum theoretical downstream data speed of ADSL from 8Mbit/s to 24Mbit/s/

**Alternative operator** Refers to service providers, usually in telecoms, other than the incumbent (or established) operator/s (see incumbent operator/s).

**AM** Amplitude modulation. Type of modulation produced by varying the strength of a radio signal. This type of modulation is used by broadcasters in three frequency bands: medium frequency (MF, also known as medium wave (MW)); low frequency (LF, also known as long wave (LW)), and high frequency ((HF, also known as short wave (SW)). The term AM is also used to refer to the medium frequency band (see MF, below).

**ARPU** Average revenue per user. A measurement used by pay-television or mobile companies to indicate the average monthly revenue earned from a subscriber.

**Asynchronous transfer mode (ATM)** A networking technology designed to handle high data volumes and low-latency content such as real-time voice and video.

**ATT** Analogue terrestrial television. The television broadcast standard that all television industries launched with. Most countries in this study are planning to phase out ATT in the next ten years.

**BARB** Broadcasters Audience Research Board. The pan-industry body that measures television viewing.

**Bluetooth** Wireless standard for short-range radio communications between a variety of devices such as PCs, headsets, printers, mobile phones, and PDAs.

**Broadband** A service or connection generally defined as being 'always on' and providing a bandwidth greater than narrowband.

**Bulk mail** High volumes of mail sent in one posting, typically of the same format and weight and often sorted to a predetermined level before being handed to the operator

**CAGR** Compound annual growth rate. The average annual growth rate over a specified period of time. It is used to indicate the investment yield at the end of a specified period of time. The mathematical formula used to calculate  $CAGR = (\text{present value}/\text{base value})^{(1/\#\text{of years})} - 1$

**Catch-up TV** Usually refers to a services that allow consumers to watch or listen to content on a non-linear basis after the initial broadcast.

**Communications Act** Communications Act 2003, which came into force in July 2003.

**Connected TV** A television that is broadband-enabled to allow viewers to access internet content.

**DAB** Digital audio broadcasting. A set of internationally-accepted standards for the technology by which terrestrial digital radio multiplex services are broadcast in the UK.

**Data packet** In networking, the smallest unit of information transmitted as a discrete entity from one node on the network to another.

**DCMS** Department for Culture, Media & Sport

**Delivery office** A facility serving a defined geographical area where postal packets are prepared for final delivery

**Digital audience** The active audience across laptop/desktop computers and mobile phones.

**Digital switchover** The process of switching over the analogue television or radio broadcasting system to digital.

**Direct mail** Addressed advertising mail

**Dongle** A physical device, attached to a PC's USB port, which adds hardware capabilities.

**DSL** Digital subscriber line. A family of technologies generally referred to as DSL, or xDSL, capable of transforming ordinary phone lines (also known as 'twisted copper pairs') into high-speed digital lines, capable of supporting advanced services such as fast internet access and video on demand. ADSL, HDSL (high data rate digital subscriber line) and VDSL (very high data rate digital subscriber line) are all variants of xDSL).

**DTO** This is a service which makes digital content available for purchase.

**DTT** Digital terrestrial television. The television technology that carries the Freeview service.

**DVR** Digital video recorder (also known as 'personal video recorder' or 'digital television recorder'). A digital TV set-top box including a hard disk drive which allows the user to record, pause and rewind live TV.

**End-to-end** Operators other than Royal Mail that provide a full postal service from collection to delivery

**EPG** Electronic programme guide. A programme schedule, typically broadcast alongside digital television or radio services, to provide information on the content and scheduling of current and future programmes.

**E-reader** An electronic, portable device capable of downloading and displaying text such as digital books or newspapers.

**Feature phone** A low-end mobile phone that has less computing ability than a smartphone, but more capability than the most basic handsets.

**Fibre-to-the-cabinet** Access network consisting of optical fibre extending from the access node to the street cabinet. The street cabinet is usually located only a few hundred metres from the subscriber premises. The remaining segment of the access network from the cabinet to the customer is usually a copper pair but could use another technology, such as wireless.

**Fibre-to-the-premises** A form of fibre-optic communication delivery in which an optical fibre is run directly onto the customer's premises.

**First-run acquisitions** A ready-made programme bought by a broadcaster from another rights holder and broadcast for the first time in the UK during the reference year.

**First-run originations** Programmes commissioned by or for a licensed public service channel with a view to their first showing on television in the United Kingdom in the reference year.

**FM** Frequency modulation. Type of modulation produced by varying the frequency of a radio carrier in response to the signal to be transmitted. This is the type of modulation used by broadcasters in part of the VHF (Very High Frequency) band, known as VHF Band 2.

**Format** The type of programme service broadcast by radio stations. Also, the part of a radio station's licence which describes the programme service.

**Frame relay** A wide area network technology which is used to provide a continuous, dedicated connection between sites without the need for a leased line.

**Fulfilment mail** Requested goods including tickets, brochures, packets and parcels

**GPRS** General packet radio service, a packet data service provided over 2.5G mobile networks.

**GPS** The GPS (global positioning system) is a 'constellation' of 24 well-spaced satellites that orbit the Earth and make it possible for people with ground receivers to pinpoint their geographic location.

**HDTV** High-definition television. A technology that provides viewers with better quality, high-resolution pictures.

**Headline connection speed** The theoretical maximum data speed that can be achieved by a given broadband. A number of factors, such as the quality and length of the physical line from the exchange to the customer, mean that a given customer may not experience this headline speed in practice.

**Incumbent operator/s** An incumbent operator usually refers to a market's established provider/s, in the UK fixed market this is BT and Kingston Communications.

**International roaming** A service offered by mobile operators that allows customers to use their phone abroad. The home operator has agreements with foreign operators that allow customers to make and receive calls, send and pick up text messages, and use some of the other mobile services (such as access to voicemail or topping-up credit on pre-pay phones). The exact services available and the charges for their use vary between operators.

**Internet** A global network of networks, using a common set of standards (e.g. internet protocol), accessed by users with a computer via a service provider.

**Internet-enabled mobile phone** A mobile phone which allows its user to access the internet via in-built access technology such as GPRS or WCDMA.

**Internet-enabled TV** An umbrella term covering any television set connected to the internet via a third-party device, such as a set-top box, a games console or a laptop/PC.

**IP (internet protocol)** The packet data protocol used for routing and carrying messages across the internet and similar networks.

**IPTV** Internet protocol television. The term used for television and/or video signals that are delivered to subscribers or viewers using internet protocol (IP), the technology that is also used to access the internet. Typically used in the context of streamed linear and on-demand content, but also sometimes for downloaded video clips.

**ISDN** Integrated services digital networks. A standard developed to cover a range of voice, data, and image services intended to provide end-to-end, simultaneous handling of voice and data on a single link and network.

**ISP** Internet service provider. A company that provides access to the internet.

**ITV** All references to ITV1 should be read as including STV, UTV and Channel Television.

**ITV licensees** ITV Broadcasting Limited, STV, UTV and Channel Television.

**LAN (Local area network)** A network for communication between computers covering a local area, like a home or an office.

**Large letter** This refers to Royal Mail's definition Large Letter. A Large Letter is any item larger than a Letter and up to 353mm in length, 250mm in width and 25mm in thickness, with a maximum weight of 750g.

**Leased line** A transmission facility which is leased by an end user from a public carrier, and which is dedicated to that user's traffic.

**LLU (local loop unbundling)** LLU is the process where the incumbent operators (in the UK it is BT and Kingston Communications) make their local network (the lines that run from customers premises to the telephone exchange) available to other communications providers. The process requires the competitor to deploy its own equipment in the incumbent's local exchange and to establish a backhaul connection between this equipment and its core network.

**Local loop** The access network connection between the customer's premises and the local PSTN exchange, usually a loop comprised of two copper wires.

**Machine to machine (M2M)** – wired and wireless technologies that allow systems to communicate with each other.

**Mail centre** A facility serving a geographical area used for the sortation of postal packets

**MMS** Multimedia messaging service. The next generation of mobile messaging services, adding photos, pictures and audio to text messages.

**MNO** Mobile network operator, a provider which owns a cellular mobile network.

**Mobile broadband** Various types of wireless high-speed internet access through a portable modem, telephone or other device.

**Multichannel** In the UK, this refers to the provision or receipt of television services other than the main five channels (BBC One and Two, ITV1, Channel 4/S4C, Five) plus local analogue services. 'Multichannel homes' comprise all those with digital terrestrial TV, satellite TV, digital cable or analogue cable, or TV over broadband. Also used as a noun to refer to a channel only available on digital platforms (or analogue cable).

**Multiplex** A device that sends multiple signals or streams of information on a carrier at the same time in the form of a single, complex signal. The separate signals are then recovered at the receiving end.

**MVNO** An organisation which provides mobile telephony services to its customers, but does not have allocation of spectrum or its own wireless network.

**MW** See FM and AM above.

**Narrowband** A service or connection providing data speeds up to 128kbit/s, such as via an analogue telephone line, or via ISD.

**Network/non-network programming** - network programming is shown by the PSB channels across the UK whereas non-network programming is made specifically for viewers in the nations and regions, and shown only in particular areas of the UK.

**Next-generation access networks (NGA)** New or upgraded access networks that will allow substantial improvements in broadband speeds. This can be based on a number of technologies including cable, fixed wireless and mobile. Most often used to refer to networks using fibre optic technology.

**Non-linear** Content that is delivered 'on demand' as opposed to linear, broadcast content.

**'Over-the-top' video** Refers to audio-visual content delivered on the 'open' internet rather than over a managed IPTV architecture.

**PACT** Producers Alliance for Cinema and Television, the UK trade association for independent film, television, animation and interactive media companies.

**Pay-per-view** A service offering single viewings of a specific film, programme or event, provided to consumers for a one-off fee.

**PDA** Personal digital assistant.

**Peak time** The period during which: a radio station broadcasts its breakfast show and, on weekdays only, also its afternoon drive-time show; a television station broadcasts its early- and mid-evening schedule, typically used by Ofcom to refer to the period between 6pm and 10.30pm each day (including weekends).

**Podcasting** A way for digital audio files to be published on the internet, and then downloaded onto computers and transferred to portable digital audio players.

**Postal packets** A letter, parcel, packet or other article transmissible by post

**PSB** Public service broadcasting, or public service broadcaster. The Communications Act in the UK defines the PSBs as including the BBC, ITV1 (including GMTV1), Channel 4, Five and S4C.

**PSTN** Public switched telephone network. The network that manages circuit-switched fixed-line telephone systems.

**Publications** Regularly produced publications such as periodicals and magazines

**PVR** See DVR

**RAJAR Radio Joint Audience Research** – the pan-industry body which measures radio listening.

**Repeats** All programmes not meeting the definition of first-run origination or first-run acquisition.

**Royal Mail Wholesale** A business unit within Royal Mail Group that negotiates with any postal operator or user who applies for access to Royal Mail Group's postal network.

**Same-day delivery** Parcel delivery scheduled for the same day that an order was placed.

**Service provider** A provider of electronic communications services to third parties, whether over its own network or otherwise.

**Share (radio)** Proportion of total listener hours, expressed as a percentage, attributable to one station within that station's total survey area.

**Share (TV)** Proportion of total TV viewing to a particular channel over a specified time, expressed as a percentage of total hours of viewing.

**SIM (subscriber identity module)** A SIM or SIM card is a small flat electronic chip that identifies a mobile customer and the mobile operator. A mobile phone must have a SIM card inserted before it can be used.

**SIM-only** A mobile contract that is sold without a handset.

**Simulcasting** The broadcasting of a television or radio programme service on more than one transmission technology (e.g. FM and MW, DAB and FM, analogue and digital terrestrial television, digital terrestrial and satellite).

**Smartphone** A mobile phone that offers more advanced computing ability and connectivity than a contemporary basic 'feature phone'.

**Smart TV** A standalone television set with inbuilt internet functionality.

**Smart watch** A wearable computer that provides features in addition to those to be expected of a watch. Typically they are connected wirelessly to a mobile phone and display incoming messages, call status and provide some degree of control over the phone, including call answering and control of audio playback. Other features can include motion sensors, cameras and GPS.

**SME** Small to medium-sized enterprise. A company with fewer than 250 employees.

**SMS** Short Messaging Service, usually used to refer to mobile text messaging (see text message below).

**Social networking site (SNS)** A website that allows users to join communities and interact with friends or to others that share common interests.

**Socio-economic group (SEG)** A social classification, classifying the population into social grades, usually on the basis of the Market Research Society occupational groupings (MRS, 1991). The groups are defined as follows.

- A.** Professionals such as doctors, solicitors or dentists, chartered people like architects; fully qualified people with a large degree of responsibility such as senior

civil servants, senior business executives and high ranking grades within the armed forces. Retired people, previously grade A, and their widows.

**B.** People with very senior jobs such as university lecturers, heads of local government departments, middle management in business organisations, bank managers, police inspectors, and upper grades in the armed forces.

**C1.** All others doing non-manual jobs, including nurses, technicians, pharmacists, salesmen, publicans, clerical workers, police sergeants and middle ranks of the armed forces.

**C2.** Skilled manual workers, foremen, manual workers with special qualifications such as lorry drivers, security officers and lower grades of the armed forces.

**D.** Semi-skilled and unskilled manual workers, including labourers and those serving apprenticeships. Machine minders, farm labourers, lab assistants and postmen.

**E.** Those on the lowest levels of subsistence including all those dependent upon the state long-term. Casual workers and those without a regular income.

**Streaming content** Audio or video files sent in compressed form over the internet and consumed by the user as they arrive. Streaming is different to downloading, where content is saved on the user's hard disk before the user accesses it.

**Superfast broadband** Sometimes known as next-generation broadband, super-fast broadband delivers headline download speeds of at least 30Mbit/s.

**Tablet computer** A mobile computer which is included within a single panel with a touchscreen.

**Telecommunications, or 'telecoms'** Conveyance over distance of speech, music and other sounds, visual images or signals by electric, magnetic or electro-magnetic means.

**Text message** A short text-only communication sent between mobile devices.

**Transactional mail** Business mail usually sent on a regular scheduled basis, often used in financial transactions, including statements, invoices and credit card bills

**Transmitter** A device which amplifies an electrical signal at a frequency to be converted, by means of an aerial, into an electromagnetic wave (or radio wave). The term is commonly used to include other, attached devices, which impose a simpler signal onto the frequency, which is then sent as a radio wave. The term is sometimes also used to include the cable and aerial system referred to above, and indeed the whole electrical, electronic and physical system at the site of the transmitter.

**TSA** Total survey area. The coverage area within which a radio station's audience is measured by RAJAR.

**TV over DSL/TV over broadband** A technology that allows viewers to access TV content – either in a linear programme schedule, or on demand – using internet protocol via broadband services, either on a PC or (via a set-top box) on a TV set.

**UKOM** UK Online Measurement. A media industry measurement of UK consumers' online activity, specified by UKOM Ltd and delivered by comScore.

**UMA** Unlicensed mobile access, a technology that provides roaming between GSM and 802.11 Wi-Fi

**Unaddressed mail** Also known as door-to-door and door drops, unaddressed mail is advertising mail with no specified recipient, usually distributed to all households within a targeted geographical area

**Unique audience** The number of different people visiting a website or using an application.

**VCR** Video cassette recorder.

**VHF Very high frequency** The part of the spectrum between 30MHz and 300MHz. FM radio is broadcast on part of this band (87.6MHz to 107.9MHz) and DAB digital radio is broadcast on another (Band III: 217.5MHz to 230MHz in the UK, and over a wider range, but shared with TV services, elsewhere in Europe).

**VoD (Video on demand)** A service or technology that enables TV viewers to watch programmes or films whenever they choose to, not restricted by a linear schedule.

**VoIP** Voice over internet protocol. A technology that allows users to send calls using internet protocol, using either the public internet or private IP networks.

**Wireless LAN or WiFi** Short-range wireless technologies using any type of 802.11 standard such as 802.11b or 802.11a. These technologies allow an over-the-air connection between a wireless client and a base station, or between two wireless clients.

**Within-the-hour-delivery** Parcel delivery scheduled for within a few hours of an order being placed.

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