Transparency in internet traffic management

Prepared for **Ofcom**

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1. Executive summary

The key findings from the research are as follows:

Drivers to ISP selection

- **Traffic management policies play little role in consumers' ISP selection decisions,** with only 1% claiming to have considered this for their fixed and/or mobile broadband purchases.

- **The key driver for consumers' selection of fixed and mobile ISPs was cost** with 50% of fixed broadband consumers and 42% of mobile consumers claiming to have considered this when selecting their current ISP.

- **Speed of connection was a top consideration for 29%** of fixed broadband consumers, but the level of research undertaken on connection speeds prior to purchase varied depending on whether consumers were more active or passive with regard to their broadband purchasing decisions.

- **The value included in the Tariff (call and text allowance packages) dominated mobile service purchasing decisions**, with 26% of consumers claiming this was a top consideration.

- **Internet factors[1] were much less important when purchasing mobile broadband services;** only 14% of mobile consumers claimed internet factors were a top consideration when selecting their current ISP. This was linked to lower consumer expectations of internet services on mobile devices, compared with fixed broadband.

- **Consumers expected a more reliable service from their fixed ISPs compared to their mobile internet services**. Most consumers considered a reliable internet service to be one that is straightforward and allows them to **complete online tasks without delay or disruption**, with no wider assessments being made beyond this expectation.

Internet usage

[1] Internet factors included reliability or internet reception, internet data allowance included in package, and network provider's usage policy (including traffic management policy)

- **Fixed broadband connections are used for a greater range of heavier traffic online activities compared to mobile internet connections**, with 16% of those with an internet-enabled phone not using the internet frequently for any activity.

- Whilst the most popular forms of use were similar for both mobile internet and fixed broadband internet, **the proportion of consumers undertaking high bandwidth activities was significantly higher for fixed broadband connections** (broadband 36%, mobile 13%).

- **Consumers believed that they experienced fewer problems using internet connections on their mobile phone,** with only 49% claiming to have experienced problems compared to 58% for fixed broadband users. However, this was coupled with less frequent usage, and findings from the qualitative research that indicate this may be as a consequence of **lower expectations and/ or reliability of the internet on a mobile phone.**

- **Satisfaction with accessing the internet via a mobile phone was lower than for fixed broadband connections** (73% vs. 81%). Despite this, there were no differences in satisfaction with mobile and fixed ISPs at a total level with 80% of consumers claiming to be satisfied with both ISP types. The qualitative research suggested this is linked to the more varied functionality of mobile phones.

Traffic management

- There is a widespread lack of awareness about traffic management information. Roughly **1 in 10 internet consumers were aware of the term and meaning of traffic management, with less than a third (29%) being aware that traffic management processes were currently in use by internet providers**.

- Consumer awareness for their own ISP's traffic management policies was low with only **9% of internet users claiming to be aware of their own ISP's policies**. Once informed about the processes of traffic management 35% of internet users feel that traffic management may help explain their internet related problems.

- Three main barriers likely to impact upon attempts to increase awareness around traffic management came to light through the research.

1) **Lack of interest**: 18% of internet users claiming it is 'very unimportant' to know their ISP's traffic management policy.

2) **Negative reactions:** Lack of awareness about traffic management policies resulted in some consumers assuming that it was a primarily negative activity where traffic management measures were associated primarily with restricted or slowed internet services, rather than more positive 'protection' of certain types of internet traffic.

3) **Lack of understanding of the more technical aspects of how the internet works means** an additional knowledge gap which needs to be crossed before increasing awareness of traffic management processes and information.

- Once traffic management processes were explained **6% of internet users claimed they would consider traffic management in their future ISP selections,** while the qualitative research indicated it would be of most interest to those who are currently experiencing internet related problems during peak times, particularly among households with multiple internet users.

Information currently available (Key fact indicators)

- Of the **9%** of consumers who were aware of their ISP's traffic management policy, **73% claimed that the information on traffic management provided was easy to understand.**

- Consumers identified a number of changes to KFI information that would help make existing information more meaningful to them. These included **avoiding text dense formats, using lay terms, using consumer friendly terminology, avoiding use of technical measures, keeping tables simple and avoiding the use of ambiguous symbols**.

- Once aware of the relevance of internet traffic management, consumers liked the idea of being able to compare offers between different ISPs using familiar online formats such as those currently used on price comparison sites, but **the ability to carry out such research is dependent upon them firstly being aware of the concept and role of traffic management**.

2. Research overview

2.1 Background

The Broadband Stakeholder Group (BSG) code for Traffic Management Transparency, released in March 2011, was introduced 'to support meaningful, useful and comparable information for consumers about the traffic management practices employed by their ISP'. In seeking to increase transparency, especially around ISP comparability, the code introduced three core elements:

- A 'commitment' to provide consumers with information on the traffic management practices used by ISPs;
- An agreed set of 'good practice principles' for how ISPs should communicate traffic management information to both prospective and existing customers. Such information should be understandable, appropriate, accessible, current, comparable and verifiable, and;
- All ISP signatories to publish a consistent Key Facts Indicator (KFI) table summarising traffic management practices for each of the broadband services they provide to consumers to allow an easier means of comparing different ISP policies.

Within the same code, it was acknowledged that explaining traffic management to consumers is not a straightforward process given that traffic management is only one of a range of factors[2] that can impact upon the experience of their broadband service.

In publishing its 2011 Net Neutrality Statement report Ofcom welcomed this approach to increasing transparency, but also cautioned that in their existing form 'the technical nature of KFI means that it will not by itself provide information which is accessible and understandable for all consumers[3]. Subsequent qualitative research undertaken by Consumer Focus in 2012[4] found that, in addition to low levels of accessibility around KFI information, further barriers around awareness and comparability existed with current information provision.

[2] Some other factors that may affect the consumer experience include: the number of users using the connection, the available bandwidth within an area, the type of network used, domestic wiring and the processing power of devices.
[3] Ofcom (2011) Ofcom's Approach to Net Neutrality
[4] Consumer Focus (2012) Lost on the broadband super highway: consumer understanding of information on traffic management

In light of this, Ofcom wanted to explore in greater depth the purchasing drivers for both fixed and mobile broadband services and the role of traffic management within this context.

2.2 Research objectives

The overarching aim of this research project was to identify to what extent, traffic management is a consideration or issue for consumers when purchasing their broadband services, as well as testing whether existing ISP KFI information is clear and transparent in existing formats. To address this aim, the research was driven by the following objectives:

Broadband product choices

- Understand how consumers make their broadband choices and the purchasing drivers for both fixed and mobile broadband services.

Customer experiences and expectations of current broadband service

- Identify the type of activities being undertaken on fixed and mobile internet connections.
- Understand their experiences with their ISP and whether consumers are potentially being adversely affected by traffic management policies.
- Establish consumer expectations around what is seen to be a 'reliable' internet service.

Awareness and understanding of traffic management

- Identify levels of awareness and engagement with existing ISP traffic management policies, including KFI tables.
- Understand what role, if any, traffic management currently plays and is likely to play in future broadband purchasing decisions.

2.3 Methodology

The methodological design for this project involved a staged approach including a substantial exploratory qualitative stage followed by a UK representative quantitative survey.

Stage 1 – Qualitative research

The purpose of the qualitative research was to provide detailed understanding around consumer awareness and understanding of traffic management, whilst also providing insights to help refine the content and terminology required for the quantitative stage. The selected research design involved a pre-stage one day of cognitive testing (held in Ealing, London) before undertaking a series of 7 workshops throughout the UK with London, Swansea, Belfast, Leicester, Manchester and Glasgow selected as locations.

- **Cognitive testing**

One of the core aims of the workshop sessions was to introduce participants to the concept of traffic management in a way that was easy to grasp, bringing them to a point whereby, at the least, they were able to have a working understanding of the basics of what traffic management involves in practice. To achieve this, a stimulus pack was created which drew upon the analogy of real traffic and motorways (see appendices for the full stimulus pack). This was then cognitively tested with a range of members of the public prior to the workshops in order to refine language, terminology and explanatory information. Seven of these interviews were undertaken in total.

- **Pre-tasking**

Prior to the workshops all participants were required to complete a pre-task. This involved asking them to record the most important reasons for purchasing their fixed and/or mobile broadband services, to note down and log any problems they were having with their internet service(s), as well as conducting a speed test on their connection (fixed broadband participants only). Participants were able to refer to their pre-task throughout the sessions to prompt their responses. Again, a copy of the pre-task document is provided in the appendices of this report.

- **Workshops**

Workshops were held around several locations in the UK. Each workshop contained 18 to 20 participants, with a total of 135 participants taking part in total. The workshops were designed to contain a mix of consumers in terms of age, type of internet used (mobile and/or broadband), location (rural/urban),

internet usage and digital literacy. Table 2.3A below provides a summary of how each of the workshops was composed.[5]

Table 2.3A: Workshop sample composition

<table>
<tr><th>W'shop</th><th>Key composition</th><th>Additional information</th></tr>
<tr><td>1 (pilot)</td><td>All participants use both fixed and mobile broadband connections</td><td rowspan="7">- Equal mix of male/ female
- Range of ages (18+)
- Mix of social grades
- Mix of lifestages
- All sole or joint decision makers with broadband purchase
- All to either have previously switched or intending to switch within 6 month window
- All to do at least 2 'low literacy' tasks (browsing, emailing) at least once a week
- At least 6 per workshop to engage in higher online literacy tasks
- Range of fixed ISPs (e.g. Virgin, BT, Sky, PlusNet, Talk Talk, Orange)
- Range of mobile ISPs (e.g. Virgin, O2, Vodafone, T-Mobile, Orange)</td></tr>
<tr><td>2</td><td rowspan="3">All participants use both fixed and mobile broadband connections</td></tr>
<tr><td>3</td></tr>
<tr><td>4</td></tr>
<tr><td>5</td><td rowspan="2">½ participants predominately use fixed connection
½ participants predominately use mobile connection</td></tr>
<tr><td>6</td></tr>
<tr><td>7</td><td>½ participants with low levels of digital literacy
½ participants with high levels of digital literacy
Workshop 7 ran as two fully separate parallel sessions.</td></tr>
</table>

All workshops lasted 3.5 hours, during which participants were split into 2 sub-groups for separate tasks. For workshops 1 to 4 participants were split by age, and for workshops 5 and 6 participants were split depending on whether they were predominately fixed or mobile broadband users. Workshop 7 operated slightly differently: due to the two differing populations included it would not have been appropriate, either practically or methodologically, to mix groups with polar opposite technical and online behavioural differences, therefore these were run as two fully separate parallel sessions.

The objectives of the workshops were

- to explore existing drivers around broadband choices and the existing role of traffic management policies within these.
- expose participants to real life examples to test whether these were clear, understandable and transparent to participants in their current form.

[5] A detailed breakdown of each workshop is provided in the appendices

- and to identify what role, if any traffic management policies would play in future purchasing decisions.

The design of workshops 1 to 6 is summarised in table 2.3B below:

Table2.3B: Structure of workshops 1 to 6

Stage 1	Discussion around broadband purchasing drivers + participant expectations and experiences of ISP
Stage 2	Discussion on unprompted awareness of traffic management to test existing awareness, knowledge, assumptions
Stage 3	Educating participants about traffic management principles through stimulus materials
Stage 4	Question and answer session with participants on traffic management
Stage 5	Practical exercise and deliberation through exposing participants to real life examples of traffic management policies/ KFI tables
Stage 6	Discussion on role of likely impact of traffic management policies/ KFI information on future broadband choices

Stage 2 – Quantitative research

This stage of the research involved a 20 minute questionnaire covering fixed broadband and mobile ISP selection, internet use, internet issues and awareness of traffic management. This was conducted using a single wave of the Kantar Omnibus; the largest weekly face to face consumer survey in the United Kingdom. This methodology provided a representative UK sample and eliminated biases the research would have been vulnerable to had alternative methodologies been used: for example, using an online methodology would inflate the awareness levels of traffic management and internet usage in the population. The single wave of omnibus delivered a total sample of 2093 UK adults 16+; a large and robust sample to analyse our population of interest, those with fixed broadband or mobile internet (c1626).

2.4 Understanding traffic management – a qualitative segmentation

Based upon the analysis of the qualitative workshops, four key segments emerged which provided a useful way of understanding differences around purchasing behaviours and the wider awareness and understanding of traffic management. These segments existed along a spectrum from passive through to active consumers. In terms of definitions, passive consumers were those who tended to undertake little or no research into the details of their internet services prior to purchase, while more active consumers were those who tended to do more detailed research. There were also differences in terms of internet behaviours among these segments, which are summarised in Figures 2.4A and 2.4B below.

Figure 2.4A: Passive Segments derived from the qualitative research

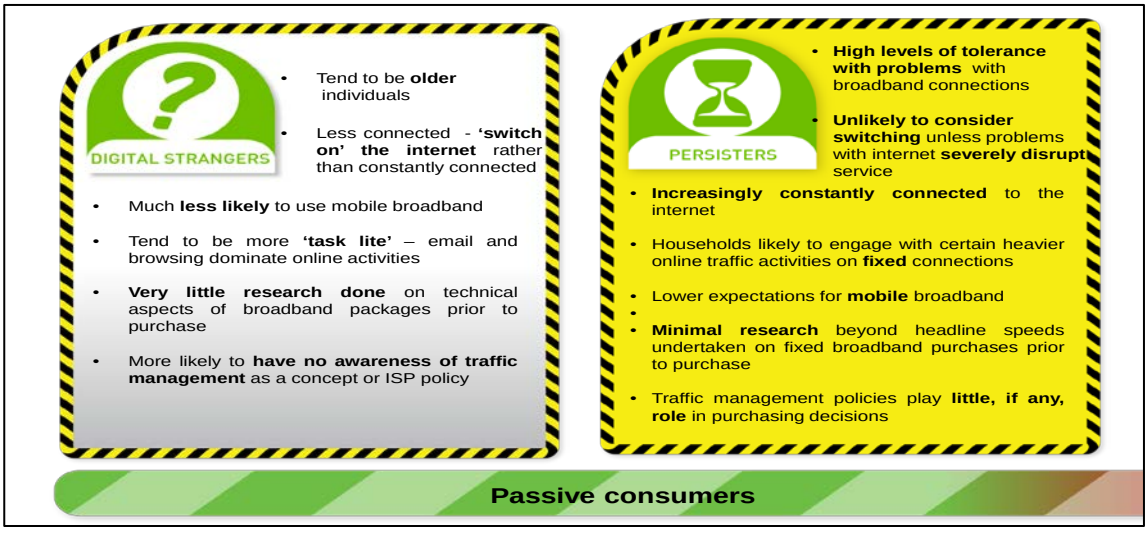
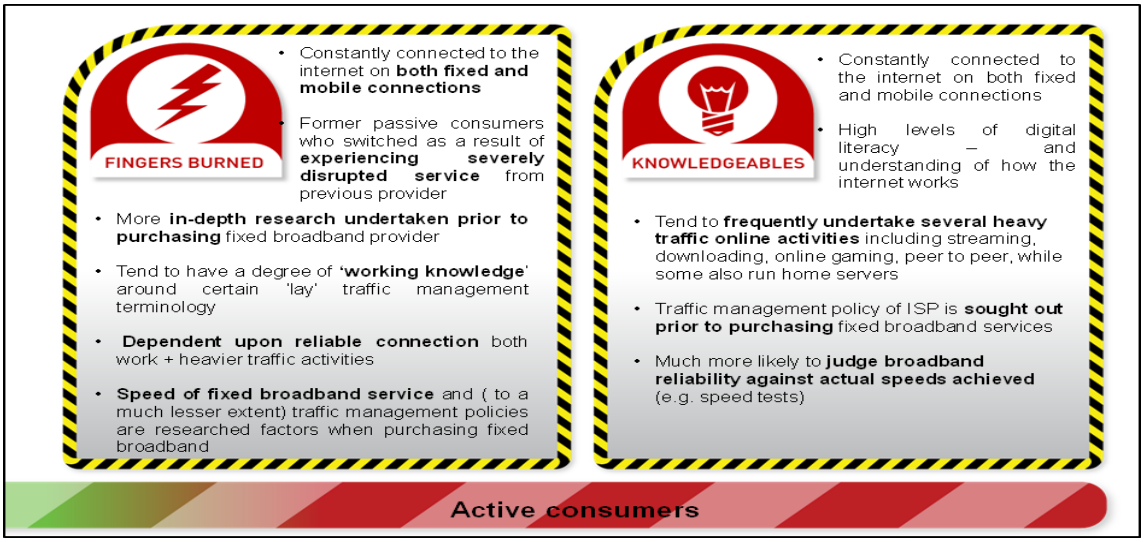


Figure 2.4B: Active Segments derived from the qualitative research



, '*Persisters*' were most prevalent throughout the workshops. The other segments were smaller in representation across the 135 participants who took part. Where relevant, reference is made to the above segments throughout the report to bring to life differences and illuminate key qualitative findings from the research undertaken.

3. Purchasing decisions

3.1 Summary of findings

ISP selection

- **Traffic management plays little role in existing purchasing decisions**, with only 1% claiming to have considered this for their fixed and/or mobile broadband purchases.
- **Cost/ price was the biggest purchasing driver** for both fixed and mobile broadband consumers with 50% of fixed broadband consumers and 42% of mobile consumers claiming to have considered this when selecting their current ISP..

Fixed broadband

- **50% of fixed broadband users have their broadband as part of a bundle.** Consequently decisions about their ISP were often influenced by other services within the package.
- For fixed broadband **speed of connection was a top consideration for 29%** of consumers, but the level of research undertaken on the speed of connection prior to purchase varied depending on whether consumers were more active or passive towards their broadband purchase decisions.

Mobile internet

- **Only 14% of mobile consumers claimed internet factors were a top consideration** when selecting their current ISP. This was highest amongst those aged 16-34 (16-34 22%, 35-54 15%, 55+ 8%).
- Many mobile consumers were in a **'traditional tariff mind-set'** when selecting their ISP, with 26% claiming this was a top consideration in their current selection.

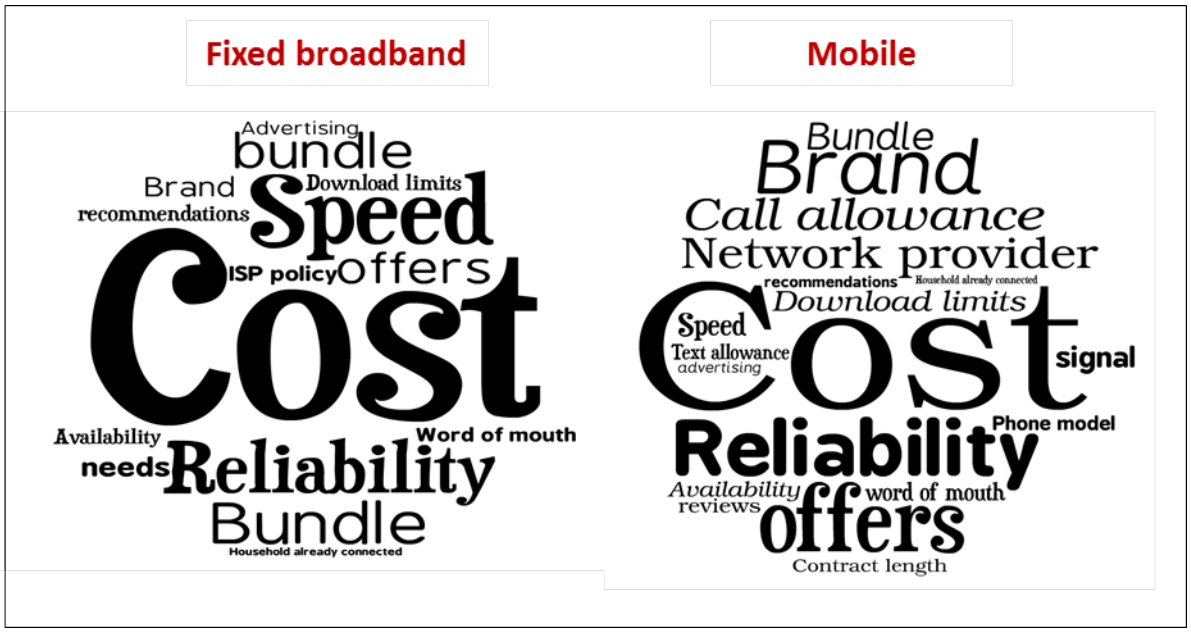
Reliability

- Expectations for in-home fixed broadband connections were **higher** than mobile internet, with the former being actively used for more **traffic-heavy online activities.** Consequently **21**% of fixed broadband consumers claimed reliability was a top consideration compared to only **8**% of mobile consumers.
- The qualitative research found that for many consumers a reliable internet service was one that **allows them to complete online tasks without disruption or service failure**. Apart from the more tech savvy consumers, technical considerations, such as consistent achievement of headline speeds, did not figure in this judgement.

3.2 Drivers to ISP[6] selection

Figure 3.2 shows an overview and comparison of the drivers for the selection of both fixed broadband and mobile ISPs that emerged from the qualitative stage of this research. The size of the words denotes the relative importance of each of the factors. While these are based on the feedback from the qualitative stage of the research, these findings were also backed up by the quantitative findings detailed later in the report.

Figure 3.2: Summary of the top drivers for selecting ISPs (qualitative feedback)[7]



Whilst cost was the largest driver for both fixed broadband and mobile ISPs, differences were found in relation to secondary factors. In the following sections the drivers for these two services are examined separately in order to explore these differences further.

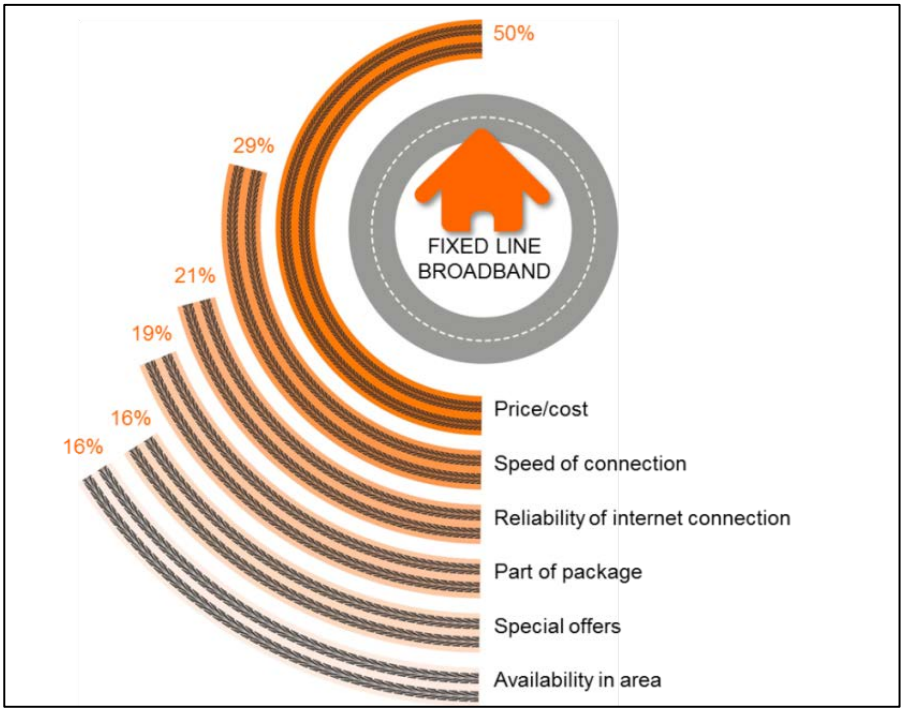
3.2.1 Fixed ISP selection

Chart 3.2.1 shows the most considered factors when selecting current fixed broadband ISPs amongst those responsible for selecting their household's broadband supplier based on the quantitative findings[8]. In relation to traffic management, *reliability* of internet was one of the more considered factors, however the explicit option of *ISP usage policies (including traffic management)* was a top consideration for very

[6] Throughout the report the term 'internet' refers to both fixed broadband and mobile internet combined. Findings relating to the different types of internet are indicated specifically.
[7] Based upon pre-task responses of 119 participants
[8] Respondent were asked to select from a pre-coded list the factors they considered when they chose their current broadband ISP. The amount of selections possible was capped at 5 in order to only ascertain the most influential factors.

few broadband customers: only 1% of those responsible for selecting their broadband service[9] considered this when selecting their current ISP.

Chart 3.2.1: Top factors influencing broadband provider selection



Base: All 16+ in the UK responsible for broadband (n1048)

C*ost* came out as the most considered factor:

- Half of broadband customers (50%) claimed that the **price or cost** of their service was their top consideration.
- 39% of consumers claimed only to have taken **one factor** into consideration, with a third of these claiming this factor was price (33%).

These findings are in line with the feedback from the qualitative workshops (Figure 3.2). Prior to the workshops research participants were required to complete a pre-task exercise that asked them to identify their top priorities when purchasing their existing broadband services with **cost** emerging as the biggest driver**. Bundled offers** were also a popular choice, as were speed and reliability of connection.

The quantitative research found that 50% of broadband households received their broadband as part of a package with other services:

- 93% of these consumers had two or three different services as part of their package.

[9] Questions regarding the selection of internet providers were filtered by those that claimed they were responsible for paying the bill or choosing the provider, as the qualitative research found that bill payers were not always the ones making the selection.

- Consumers were most likely to have a fixed line connection with their broadband (90%) and almost half (49%) had a pay TV service in their broadband bundle.
- Broadband consumers under 35 were the least likely to have broadband in a package with only a third receiving their broadband as part of a package (16-34 33%, 35-54 59%, 55+ 61%).

As a consequence of a large number of consumers receiving their broadband as part of a bundle, being *part of a package* was also one of the most considered factors amongst broadband households with 19% claiming to have considered this when selecting their ISP.

The role of bundling as a consideration was explored further in the workshops. It was found to be a particularly important selection driver amongst the '*Persisters*', '*Digital Strangers'* and, to a slightly lesser degree, '*Fingers Burned'* participants. For many of these participants their decision to buy was driven mainly by the TV package element of the bundle, rather than the broadband service.

> *"I went with a bundle and didn't pay much attention to cost. Connections and downloads came second to sport and TV package"*
>
> Male, Leicester

> *"I'm with Sky because they have everything; multiple channels, rooms and broadband – but the TV is the main thing"*
>
> Female, Belfast

For some, the convenience of having one overall provider – and therefore one bill – was a further consideration, especially where discounts were often offered as part of the bundle/deal. As a result of these factors, the broadband component within these deals, especially for '*Digital Strangers*' and '*Persisters*' tended to be the least researched part of the purchasing decision process.

In both the quantitative and qualitative research, *'speed of connection'* was also mentioned as being important in the purchasing decision with 29% of broadband choosers claiming this was a top consideration when selecting their current ISP. The only differences by demographics in regards to the factors considered when selecting their current ISP were in relation to the *speed of connection* with these differences linked to differing usage; this is discussed further in section 3.4.

- Significantly[10] fewer decision makers over 55+ claimed to have considered speed when making their selection (16-34 39%, 35-54 30%, 55+ 20%).

[10] Any demographic differences are significant at the 99% level

- Those with children in their household were more likely to have considered speed than those without any children (children 35%, no children 26%).
- Bill payers/choosers who claimed to use their internet frequently for high band activities were also more likely to have claimed speed was a top consideration when selecting their current fixed ISP (any high bandwidth activities 36%, low bandwidth only 10%).

Whilst speed of connection was a consideration when purchasing broadband services, it is important to be aware that this term means different things to different consumers. When explored in the qualitative research it came to light that what *'speed of connection'* meant in practice differed among participants. As a consequence, the way this was taken into consideration as a driver for ISP selection did not necessarily lead consumers to seek out traffic management information.

For consumers, who were more passive in terms of making their purchase, reliability meant simply seeking out the headline speed of their broadband. For these consumers, it was often assumed that the faster the internet connection, the more reliable their service would be. There was no awareness that, irrespective of headline speed, their services could potentially be affected as a result of traffic management policies.

However, participants within the '*fingers burned*' and '*knowledgeables*' segments did seek out more detailed information on speed of connection prior to purchase. For the former, investigating information about speed was important, as many had a poor experience with a previous broadband service. An unwillingness to undergo a similar experience again meant that **speed of connection became an elevated consideration when purchasing their most recent broadband services**. For many in the '*knowledgeables*' group, a stable, fast connection was integral to the online activities they undertook, whether this be for professional needs such as working at home, or more leisure orientated activities such as streaming or online gaming, and as a result their pre-purchase decision making involved researching their ISP's traffic management policy.

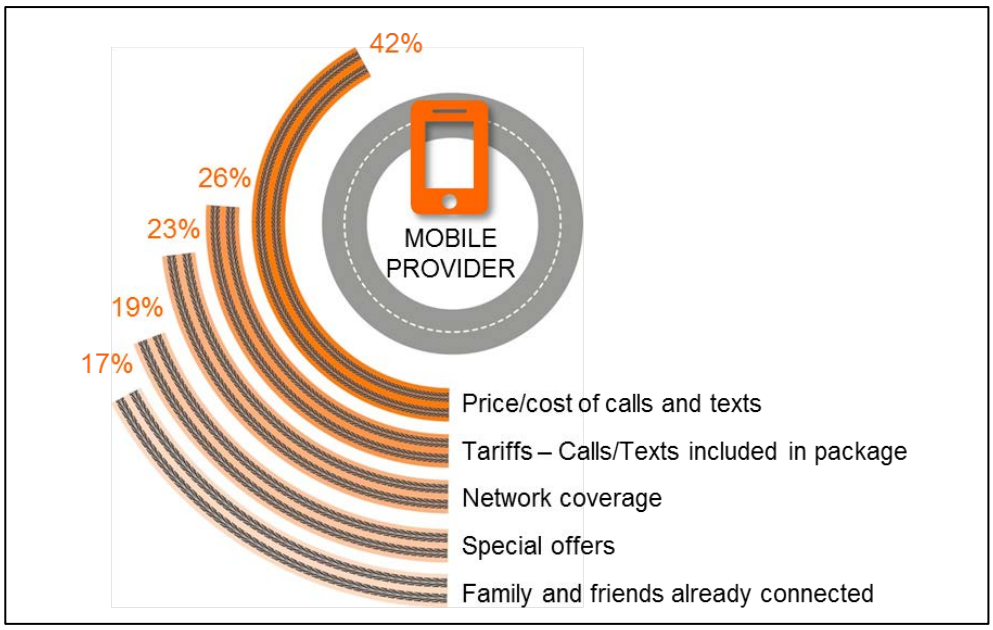
> *"I went for speed…we have the Infinity hub because my partner works from home, so we just needed the internet to be quick and they [BT] were the fastest at the time"*
>
> Female, Swansea

> *"I did a lot of research. I went to Uswitch, checked my postcode, decided on [buying] fibre optic and then phoned Virgin up…I have to rely on the internet so much, it is so important"*
>
> Male, London

3.2.2 Mobile ISP selection

Chart 3.2.2 shows the most considered factors, based upon the quantitative research, when selecting mobile ISPs amongst those responsible for this decision.

Chart 3.2.2: Top factors influencing mobile ISP selection



Base: All 16+ in the UK responsible for a mobile phone with internet access (n1175)

As we saw for fixed broadband connections, the most considered factor amongst mobile consumers who have an internet enabled phone[11] was the **price or cost of calls and texts**:

- 42% claimed to have considered the cost when they selected their current ISP
- 44% of mobile consumers claimed to have only considered **one factor** when selecting their mobile ISP, and of these people,29% claimed that their only consideration was price and cost of calls.

However, there was a greater variety in factors that were considered when selecting mobile in comparison to the selection of fixed broadband ISPs. A similar theme emerged strongly from the qualitative research. One notable finding from the workshop sessions was the **continual appeal of traditional call and text bundles in driving purchasing decisions for mobiles**. As a result mobile internet data allowance tended to be a secondary factor, if at all, for many when buying their mobile services.

> *"For me my mobile has to be reliable, I am always on my phone and I need one with the biggest [call] allowance"*

[11] Mobile consumers with a phone without internet access were not included in the analysis as the subject was not of any relevance to these respondents. When mobile customers are referenced in the report, these are mobile customers with an internet enabled phone only.

Male, London

As a consequence of this traditional tariff mind-set, internet factors were relatively ignored in the selection process. From the quantitative survey it was found:

- Only 14% of those responsible for selecting the provider for their internet enabled phone claimed that factors such as *reliability of internet connection* and *data allowance* were one of their top 5 considerations.
- 26% on the other hand claimed to have considered their mobile tariff (the second most considered factor).
- Consideration of internet factors was higher amongst men (men 18%, women 13%) and those aged 16-34 (16-34 22%, 35-54 15%, 55+ 8%).
- Of those who did claim that they considered internet factors when making their choice of mobile ISPs, 38% said that it was *3G availability* in particular, whilst 37% claimed it was *internet reliability*.
- As seen for fixed broadband, only 1% of mobile internet customers claimed to have considered their **ISP's usage policies (including traffic management)** in their selection process.

Another factor was network coverage with 23% claiming to have considered this in their mobile ISP selection. This was investigated further in the qualitative research and the term tended to relate more to making phone calls than a 3G internet connection as a purchasing driver.

> *"Coverage has to be the main thing. Cost does not matter if you don't have coverage."*
>
> Male, Leicester

> *"I went with O2 because the mast is at the end of the street. I don't use it for [using] the internet, only as a mobile phone."*
>
> Female, Leicester

This issue of coverage was found in the qualitative research to be a stronger influence in ISP selection in areas where there is poorer network coverage such as Leicester and Northern Ireland and to a lesser extent, Swansea.

> *"Cost was a factor but also consultation with IT professionals…BT Infinity won't come to our area so went with Cable [Virgin]."*
>
> Female, Leicester

"It's not there in the villages [Cable] so the further you go out from the central core potentially you're going to get a worse service."

Male, Leicester

This was echoed in the quantitative research with significantly more mobile consumers living in rural locations claiming network coverage was a top factor (urban 21%, rural 32%).

A further driver for younger mobile users, in particular, was the handset model. For this group the main reason for selecting a mobile ISP was the offer of a free, or heavily discounted, 'in-demand' handset, especially for iPhones and Samsung Galaxy models. There was some evidence across the workshops that these consumers were even willing to trade off having the most appropriate tariffs for their use if it meant they were able to secure their desired handset model.

"I have always been with O2 because they did the iPhone"

Male, Manchester

"I used to be with Vodafone but I wanted the iPhone so I switched"

Male, London

3.3 The role of reliability in purchasing decisions

As previously noted, traffic management policies were a top consideration for only 1% of fixed broadband and mobile internet consumers. However, when asked about the role of 'reliability' of their internet connection – an area that may become problematic if the consumer has their broadband service negatively 'traffic managed', 21% of fixed broadband consumers and 8% of mobile internet consumers claimed this was a top consideration.

When asked directly whether reliability of their fixed broadband was important in their selection, 81% claimed that it was[12]

- A greater proportion of younger consumers claimed that reliability was important to them compared to older fixed broadband consumers (16-34 86%, 35-54 83%, 55+ 75%).

[12] 'Important' is a net of those that claimed it to be very important or fairly important on a 5 point satisfaction scale.

- For consumers with children, reliability was also a factor considered by more (children 86%, no children 78%).

When asked directly whether reliability was important in regards to internet on a mobile phone, significantly fewer claimed that it was in comparison to fixed broadband (broadband 81%, mobile 71%), and, again, reliability was less considered by older consumers (16-34 80%, 35-54 67%, 55+ 57%).

In order to fully understand what 'reliability' actually means to customers, this issue was explored in depth with participants in the qualitative workshops. For almost all participants, a reliable internet service was defined in quite surface level terms as allowing them to *do what they wanted to do online without undue disruption or loss of service*. In other words, if participants were able to use the internet to do what they wanted quickly then that was deemed a satisfactory service. For those in the '*Digital Strangers*' segment this often meant being able to connect at the first attempt, complete a task and then shut down their computer, while for the remaining segments being constantly connected without loss of service was key to judging what constituted a reliable internet service.

> *'[It needs to be] effortless and, you know, when your turn your device on it [the internet] will work '*
>
> Male, Manchester

> *'A reliable internet connection means not having to wait'*
>
> Female, London

> *'I am happy with the speed, we have never had a problem. A reliable service for me is constant good speed, network not dropping and good customer service to help you resolve issues '*
>
> Female, London

While those in the '*knowledgeables*' segment were more likely to monitor their actual versus their headline speeds as part of determining whether they were receiving a reliable service, this more advanced monitoring measure of service played little, if any, role for other participants. For these participants, no connection was made between having a reliable service and consistently obtaining the headline speeds that they had signed up to. Most participants stated that they were not aware of the

actual headline speed of their connection until they were asked to conduct a speed test as part of the pre-task.

For many of these participants, having such 'basic' expectations around 'reliability' was in part due to a wider lack of understanding of how the more technical aspects of the internet worked, and as a result, as long as a service *felt* fast and worked in a stable way then this was sufficient. Additionally, for these participants there was also an implied assumption that internet services supplied by big brands such as BT, Virgin and Sky would be, as a direct result, 'reliable' in terms of providing a suitable internet service for their needs.

4. Internet usage

4.1 Summary of findings

Internet usage

- Households were **connecting to their fixed broadband connection with 2.9 different devices** on average.
- **Mobile internet connections were used less frequently than fixed broadband connections;** 16% of those with a mobile phone able to connect to the internet claimed to not conduct any internet activities frequently using their mobile phone.
- **Social networking** was the only activity for which the proportion claiming to do so frequently was similar for both fixed broadband and mobile internet connections, with 40% of broadband consumers and 43% of mobile internet consumers having claimed to undertake this activity frequently.
- Low bandwidth activities such as browsing and emails were the most frequently undertaken for both fixed broadband and mobile internet connections However **the number of people undertaking high bandwidth activities frequently was significantly higher for fixed broadband connections** (broadband 36%, mobile 13%).

Internet expectations

- The qualitative feedback suggested that the **expectations of mobile internet were lower than for fixed broadband connections.**
- **58% of fixed broadband users claimed to ever experience issues with the internet,** this is in comparison to 49% of mobile internet users. This is most likely linked to the less frequent usage of the internet on a mobile phone, possibly due to the negative expectations of the service as mentioned above.

ISP perceptions

- **Satisfaction with internet on a mobile phone was lower than for fixed broadband connections** (73% vs. 81%) The qualitative feedback suggests this is a result of less frequent use and more varied applications for a mobile device.
- The lower satisfaction with the internet of mobile internet does not translate into a lower overall perception of the provider (80% for both internet mobile and fixed ISPs).

4.2 Internet usage

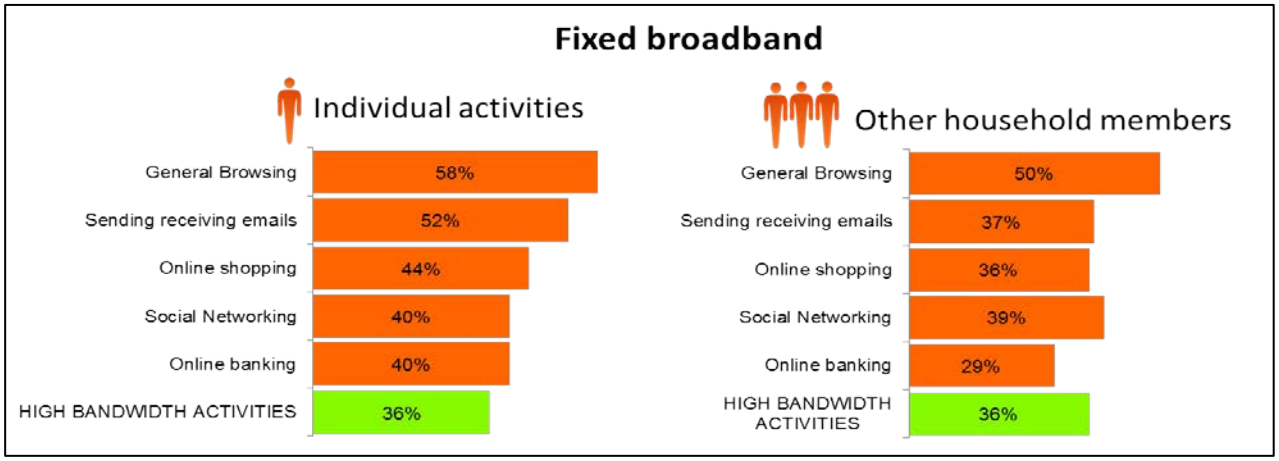
The usage patterns of a fixed broadband connection and a mobile internet connection differed, not only in the number of devices using the connection, but also the variety of activities undertaken and the number of high bandwidth activities undertaken.

4.2.1 Fixed broadband connections

- The average household connected 2.9 different devices to their fixed broadband internet with a third (34%) actually connecting four or more different devices.
- Even those in single occupancy households claimed to connect to their broadband on 2 devices on average; this number increased to 3.4 devices in households with 4 or more occupants.
- Whilst most broadband users (94%) were using traditional devices such desktops or laptops, over two thirds (68%) were connecting with newer technologies such as smartphones and tablets.

Chart 4.2.1 shows the top 5 activities most frequently undertaken on the internet using a fixed broadband internet connection.[13]

Chart 4.2.1: Activities most frequently undertaken using a fixed broadband connection[14][15]



Base: All 16+ in the UK with broadband in home (n1389)/all with broadband in home and more than one person in the household (n1201)

The activities most frequently undertaken by fixed broadband internet consumers were generally lower bandwidth activities such as general browsing (58%) and sending and receiving emails (52%). However,

[13] Respondents were asked to select the top activities they did most frequently using their internet connection. This number was capped at 5 in order to examine the most frequently used activities whilst also capturing the lower end users that only do a couple of activities using their connection.

[14] Data for broadband activities was collected in two parts firstly for individuals and then for household member, this was in order to examine bill selectors' tech behaviour and potential strain on the overall broadband connection. This means that mobile and broadband activities are only comparable on an individual level.

[15] 'High bandwidth activities' refers to the net of Peer-to-Peer file sharing, watching catch up TV, or watching/ streaming material.

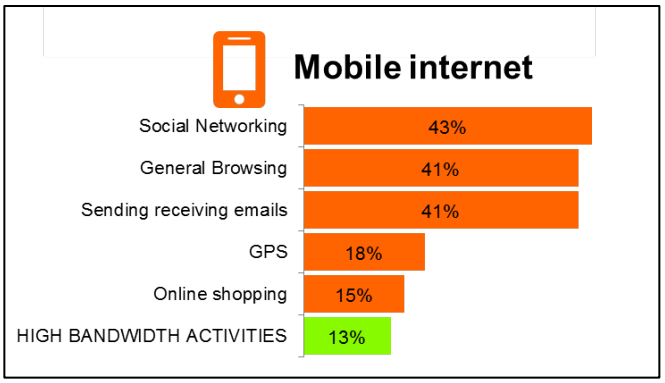
over a third (36%) also claimed to frequently undertake high bandwidth activities such as peer-to-peer file sharing or streaming content:

- 48% of broadband internet users claimed that watching TV catch up or streaming content such as videos or music, was a frequent activity for either themselves personally or other members of their household using their broadband internet connection.
- Streaming content was more common amongst those with children in their household (children 55%, no children 43%).
- Only 3% claimed to do peer-to-peer file sharing frequently with no variation amongst the demographics.

4.2.2 Mobile internet connections

In contrast to fixed broadband connections, by the very nature of mobile internet, consumers are connected from a single device and usage is not then directly affected by the activities of other members of their household. In addition to this, the activities undertaken using a mobile connection differed to those for fixed broadband. Chart 4.2.2 shows the activities most frequently undertaken on the internet using a mobile internet connection.[16]

Chart 4.2.2. Activities most frequently undertake using a mobile internet connection



Base: All 16+ in the UK with a mobile with internet access (n1175)

The activities undertaken most frequently using a mobile internet connection were social networking (43%) general browsing (41%) and sending or receiving emails (41%). Whilst the most frequently undertaken activities using a mobile internet connection were the same as for fixed broadband connections, the number of people claiming to do these activities was higher for fixed broadband than mobile internet.

[16] Respondents were asked to consider activities undertaken using a mobile internet (e.g. 3G, 4G or edge) only and not Wi-Fi

- 16% of consumers with an internet enabled phone claimed they did not undertake any internet activities frequently using their mobile internet connection. This was particularly the case for C2DEs and those over 55+ (ABC1 13%, C2DE 19%) (16-34 9%, 35-54 14%, 55+ 44%).
- The only activity which was undertaken frequently by a similar proportion of consumers on fixed broadband as on mobile internet was social networking (mobile 43%, fixed broadband 40%).
- 37% of those who only do one activity frequently using a mobile internet connection claimed this activity to be social networking, whilst 24% only used their mobile internet connection for general browsing.

The number of consumers frequently undertaking high bandwidth activities was also significantly lower for those using mobile connections than for consumers using fixed broadband connections (mobile 13%, fixed broadband 36%).

- Only 4% of mobile internet consumers claimed that watching catch up TV was a frequent activity on their mobile phone compared to 22% who claimed that this was a frequent activity using their fixed broadband connection.
- Similarly streaming content was claimed to be a frequent activity for significantly fewer consumers using a mobile internet connection than those using a fixed broadband connection (mobile 12%, fixed broadband 21%).

From the qualitative research we know there were many reasons for differences between activities conducted on the mobile internet and fixed broadband. Whilst reliability is one influential factor which is detailed further in section 4.3, other influences included the practicalities of accessing the internet from a small device and the limits set on internet use within their mobile ISP package.

4.3 Internet expectations

From the qualitative research it was found that expectations for in-home broadband were much higher than expectations from a mobile internet connection: the former was primarily seen as being the more 'important' service between the two. This is possibly reflected in the differences in usage outlined in sections 4.2.1 and 4.2.2 above. Being able to undertake tasks without disruption was a base level expectation for in-home services, and as a result participants were much more likely to be attuned to any problems affecting this connection.

"I use my home connection more than my mobile so speed is more important…my home broadband has more people connected to it so I need the service at home to cover everything"

Male, Manchester

"I think we are spoiled…when it [fixed broadband] does start to slow down it is so annoying because you know how fast it can be"

Male, Leicester

"My home connection is so much more important than my mobile. It is much more important that it is reliable"

Female, London

A small number of participants noted that their mobile broadband provided an excellent user experience but many said their service tended to be variable in terms of being able to connect to the internet while 'on the go'. For most mobile users these lower expectations were almost an accepted aspect of using a mobile internet connection. This tolerance, or inertia, towards mobile services was, in part, due to **very few 'essential' tasks or heavy traffic tasks being undertaken on these devices** as a result of being used 'on the go', but also linked to the lower reliability of the connections that users tended to experience on their Smartphone devices. While frustrating at the time, most were still able to rely upon their fixed broadband connection for more important tasks, thus the importance of their mobile internet service was less of an issue for them.

"Yeah my mobile[internet] is slower, but I see it as a phone, it's there to make calls. Sometimes I want it hurry up but I don't sit there and think my phone [internet] should be as fast"

Female, Manchester

"If I want to do something on my phone I will wait 'til I am at home with my wireless router"

Male, Leicester

Whilst the qualitative research indicated a higher experience of issues with mobile internet than fixed broadband, in the quantitative stage more consumers claimed to experience problems with their internet connection with fixed broadband than with mobile internet; this is because frequency of internet use is

not taken into account. It was found that, at a total level, significantly, more consumers claim to experience problems such as buffering, running out of data allowance and temporary loss of connection for their fixed broadband connection than a mobile internet connection.

- 58% of broadband consumers claimed to ever experience **any** internet problems compared to 49% of mobile consumers using a mobile internet connection.[17]

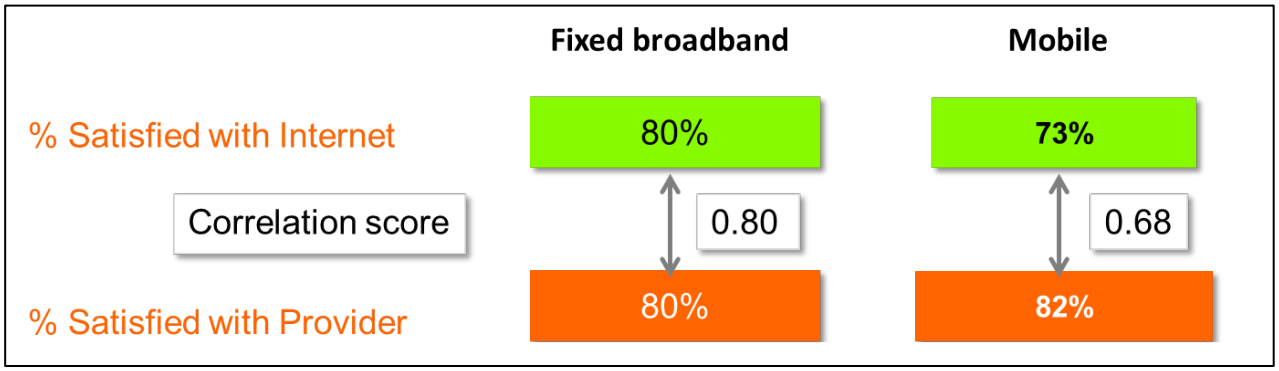
In addition, there was some variation amongst the types of issues experienced:

- In particular people were more likely to experience problems with buffering when streaming content with a fixed broadband connection compared to mobile internet (fixed broadband 26%, mobile 17%).
- However, running out of data allowance was claimed to be an issue for more consumers using a mobile internet connection (fixed broadband 4%, mobile 10%).

4.4 ISP perceptions

Figure 4.4 shows how many people claimed to be satisfied[18] with their internet connection for fixed broadband and for internet on their mobile phone (e.g. GPRS, 3G, and 4G etc). It also shows the percentage of users who claimed to be 'satisfied' with their ISP at an overall level. The correlation score shows the relationship between perceptions of satisfaction with internet and perceptions of satisfaction with the ISPs overall.

Figure 4.4: Percentage satisfied with internet and percentage satisfied with ISP overall



Base: All 16+ in the UK with broadband in home (n1389)/ with a mobile with internet access (n1175)[19]

[17] For questions regarding internet issues the questionnaire was filtered on those who ONLY had mobile internet. However, analysis shows that there are very few significant differences (at the 99% level) in usage between this group and those with internet on their mobile and a fixed broadband connection; sending emails and playing games only.
[18] 'Satisfaction' is a net of those that claim to be very satisfied or fairly satisfied on a 5 point satisfaction scale.
[19] Respondents stating 'Don't know' for their satisfaction were removed from the correlational analysis. Final base sizes for internet satisfaction were (fixed broadband n=1365, mobile=1108) for overall satisfaction (fixed broadband=1363, mobile=1155)

Despite fewer consumers claiming to have experienced issues with the internet on their mobile (as discussed in section 4.3), fewer also claimed to be satisfied with the internet on their mobile phone compared to consumers with a fixed broadband connection (80% vs. 73%). This suggests a causal relationship between usage and reliability: lower satisfaction with mobile internet resulting in less frequent usage resulting in lower total experience of issues.

However, this lower level of satisfaction with the service does not translate into a lower overall satisfaction with the provider: similar levels of consumers claimed to be satisfied with their fixed broadband as were satisfied with their mobile ISP (broadband 80%, mobile 82%). From the qualitative research we know that this is influenced by the fact that a mobile provider provides more than just internet and there are other factors influencing perceptions. This is reflected in the correlation score; whilst there is a strong relationship between satisfaction of internet and overall satisfaction for both broadband and mobile internet, this relationship is weaker for mobile ISP perceptions (0.80 vs. 0.68).

5. Traffic management

5.1 Summary of findings

Awareness

- Roughly **1 in 10 internet consumers were aware of the term and meaning of traffic management**, with less than a third (29%) being aware that these processes were in place.

- Amongst the 9% who were aware of their own ISP's traffic management policy**, there was no universal method of obtaining** this information with 18% being informed by their ISP and 17% coming across the information whilst browsing their ISP's website.

Diagnosing internet issues

- Once informed about the processes of traffic management **35% of people who experienced internet issues felt they may have been affected** by traffic management compared to only 9% who thought this was the case prior to the explanation being given.

Challenges for raising awareness of traffic management

- **Lack of interest** - Only 35% of internet users felt it is important to know about traffic management with 18% claiming it is very unimportant

- **Negative reactions** – Due to the lack of awareness of traffic management originally, , responses expressed in the qualitative workshops towards traffic management policies were sometimes negative, especially amongst older internet users

- **Lack of technological knowledge** – A lack of basic understanding of how the internet works amongst some consumers meant that an extra level of education is needed before raising awareness of traffic management is possible.

Future purchases

- At a total level **only 6% of internet users claimed they would consider traffic management in their future ISP selections** even after the explanation of the processes and the potential consequences of not doing so.

- The qualitative feedback suggested that for those who experience issues with their internet, traffic management is something that **would be considered, but would not drive future ISP selections.**

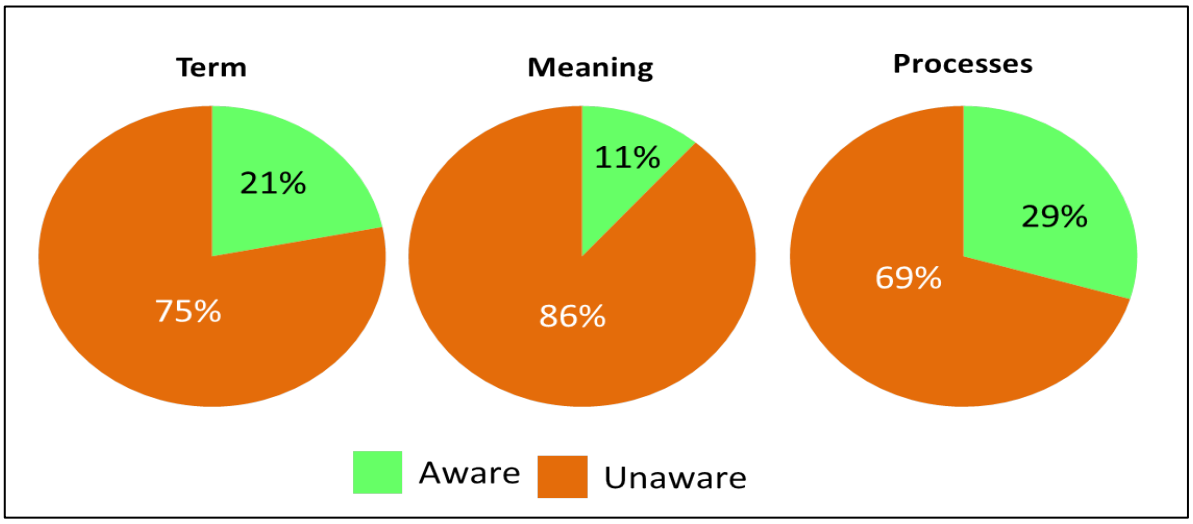
5.2 Awareness

In the quantitative research, respondents were initially asked whether they were aware of the term 'internet traffic management' and whether they were aware of what the term meant. Following this they were supplied with an explanation of the term and the processes involved. This explanation was developed following the qualitative feedback on the language and terms best used for a clear understanding (Appendix 7.3).

After being given this explanation those who previously stated that they were not aware of the term 'internet traffic management' were then asked whether they were aware that these processes were currently put in place by some ISPs.

Chart 5.2 shows the topline levels of awareness of internet traffic management across all internet consumers. It covers awareness of traffic management as a term, understanding of the meaning of the term traffic management within this context, and awareness that these processes are in place.

Chart 5.2: Awareness of the term, meaning, or processes of traffic management



Base: All 16+ in the UK with broadband in home or a mobile phone with internet (n1626)

Overall, the research found that awareness of internet traffic management was very low:

- 75% of all internet users[20] had never heard of the term 'Internet traffic management' and 69% were not even aware that these traffic management processes were in place.

[20] 'Internet users' refers to those consumers with either a fixed broadband connection of an internet enabled mobile phone.

- Awareness of the term was highest amongst men (men 28% vs. women 15%), younger internet users (16-34 24%, 35-54 23%, 55+ 15%), and ABC1s (ABC1 25%, C2DE 17%), these are also the demographics associated with more frequent internet use.
- Those who claimed to frequently use high bandwidth activities such as streaming or peer to peer file sharing, using either a fixed broadband or mobile internet connection, were significantly more likely to have heard of the term 'internet traffic management' than those who did not undertake these activities (26% vs. 19%). They were also significantly more likely to be aware of the meaning (15% vs. 9% respectively).

However, even amongst the 11% of internet users who claimed to be aware of the term and the meaning of traffic management, fewer than half (48%) were aware of their own ISP's traffic management policy; equating to only 9% of the total internet population.

When asked how they came to be aware of their own ISP's traffic management policy, there was no overriding method of obtaining this information:

- 18% were told this information by the ISP when they signed up for the service
- 17% claimed to have found the information just browsing through their ISP's website
- 14% found information after experiencing problems with their internet services
- 13% found out about it in advertising.

Within the qualitative workshops respondents were provided with an in-depth presentation explaining the processes behind internet connections and traffic . This had been developed and refined via a series of cognitive testing sessions (see appendix 7.2). Despite being given a more thorough explanation, a similar lack of awareness was still evident across the qualitative workshops as it was in the quantitative research. Participants were asked what they thought 'internet traffic management' meant, and while many beyond the most tech savvy, struggled to answer, those who did struggled to offer anything beyond 'literal' guesses,

> *"Is it like off peak travel where times of day are cheaper than others?"*
>
> Female, London

> *"I imagine a room where people are controlling the 'tube' network and pressing buttons to ease the flow of internet traffic"*
>
> Female, London

"[When I hear 'traffic management'] I think of being stuck in traffic jams"

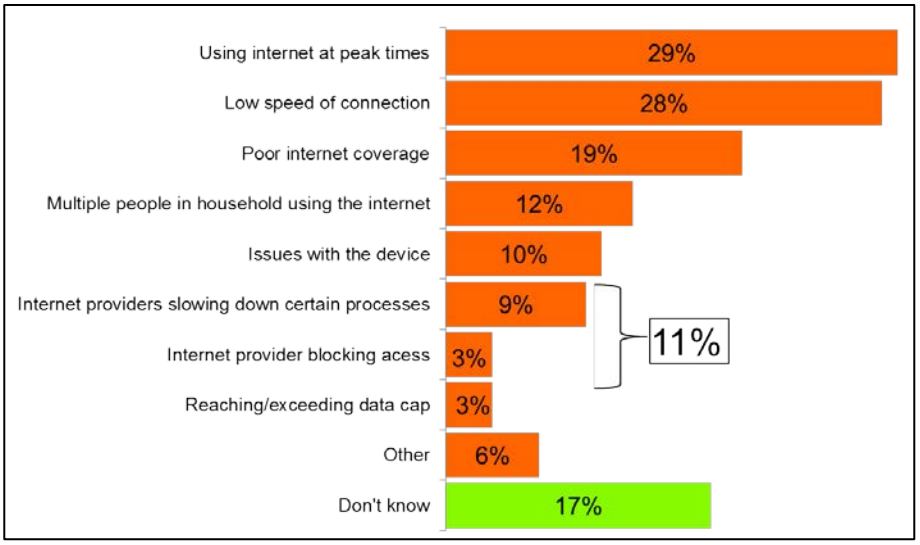
Female, Swansea

Once the term was explained, some participants noted that they were vaguely familiar with some of the processes involved with traffic management, mentioning things such as 'being slowed down' or 'throttled' as a consequence of activities done online. However, even for those who were aware that 'something' was going on, there was no evidence that they were aware that such measures were part of their ISP's management policy/strategy or that the measures could vary by ISP. They were also unaware that ultimately as a consumer, they had any degree of control over which ISP they choose depending on their policies.

5.3 Diagnosing internet issues

Chart 5.3 below shows the reasons that internet users attributed to the issues they have experienced with the internet connection.

Chart 5.3: Reasons attributed to issues experienced with internet connections



Base: All 16+ in the UK with broadband in home or a mobile phone with internet that ever experience internet issues (902)

In the quantitative research, when asked what they thought caused their internet problems, only 11% believed it was because of ISPs blocking access or slowing down certain processes. However, once the term and processes of traffic management were explained to them 35% of these respondents felt that they may have been affected by these processes.

Across the qualitative workshops, there was evidence to suggest that there was frustration among participants when trying to explain problems they were experiencing with their broadband services. However, as with the quantitative research, there were several examples where participants felt that traffic management measures, when explained, could be the reason why, at peak times, they were experiencing difficulties with their service.

> *"[traffic management explains] times when I am trying to download something and someone else in the household is doing something different and they are having no issues, but I am having issues"*
>
> Male, Belfast

> *"It is so helpful to know as this is what happens to my boyfriend's phone once he uses his data"*
>
> Female, London

> *"I now know what is going on with my internet connection"*
>
> Male, Belfast

Participants in **households where two or more people were undertaking different activities during peak time** seemed to experience particularly poor broadband service (unrelated to geographic factors).

> *'We've got iPads…watching, streaming, someone else is browsing, it slows it [the internet] down…if I am downloading a movie he'll [son] be shouting up because he'll be losing on his game because he can't get in quick enough'*
>
> Male, Leicester

> *'I never realised that him on that phone [playing online games] was using my internet. I can't understand that'*
>
> Male, Leicester

> *'Even if you live in a shared house like me…before, there has been five of us in the house and it's always me looking after the internet…I don't have any idea on what limit is or what the speed is'*

Male, Leicester

For these groups in particular there was a desire to find out more about traffic management information: while it may have been the case that their problems could have been caused by the number of those accessing the same network, the general feeling among these participants was that increasing their awareness of traffic management could provide a means of helping them understand and resolve issues they were having with their current service.

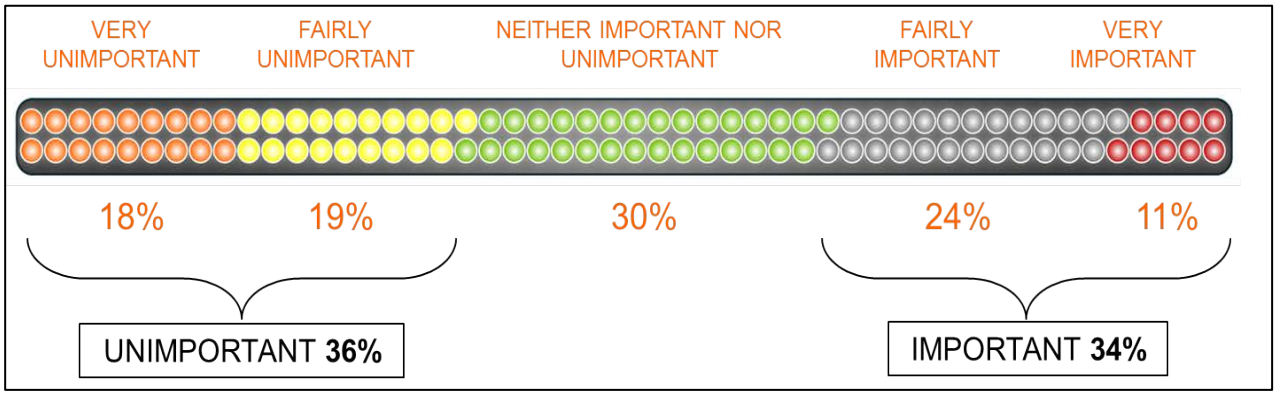
5.4 Challenges in raising awareness of traffic management

As the above discussion has identified, lack of knowledge is a major barrier to increased awareness around traffic management information. However, the research found that there are likely to be a number of challenges associated with increasing awareness around traffic management.

5.4.1 Lack of interest

Figure 5.4.1 shows the extent to which internet users felt it is important to know about the traffic management policies of their own ISP.

Figure 5.4.1: Extent to which internet users claim it is important to know about traffic management policies of their ISPs



Base: All 16+ in the UK with broadband in home or a mobile phone with internet (n1626)

- After being informed about the processes of traffic management, about a third(34%) of all internet users felt it was important for them to be aware of their own ISP's policy.
- This was highest among internet users under the age of 55, (16-34 35%, 35-54 39%, 55+ 25%) and higher social grades (ABC1 37%, C2DE 31%).
- More of those who had previously experienced issues with their internet claimed it was important to know about traffic management (any issues 41%, no issues 26%).

Of those who did feel it was important to know, most of these claimed it was to make them a better and more active consumer; 27% thought it would help them choose the right package whilst 25% thought it would help them manage their usage.

Despite this, at the other end of the scale, 18% of internet users felt that it was very unimportant for them to know the traffic management policy of their ISP.

- Internet users aged 55+ and in the C2DE social grade were the most likely to claim it is very unimportant (16-34 15%, 35-54 15%, 55+ 26%) (ABC1 16%, C2DE 20%).
- The proportion for whom it was 'very unimportant' was also highest amongst those who claimed to use their broadband internet infrequently (undertake one or no internet activities frequently):25% claimed it was very unimportant, compared to 16% of more frequent internet users (undertake more than one activity frequently).
- In line with these findings, 43% of those who claimed that it was not at all important stated they were just not interested and 21% stated that they did not feel it would affect them.

5.4.2 Negative consumer reactions

In addition to lack of interest, observations from the workshops suggest negative reactions may also pose a challenge for increasing awareness of traffic management. Once informed about traffic management, a common response tended to be negative, especially among older participants, despite being informed that traffic management measures could help improve their internet experience. There was also a sense of surprise around the fact that such measures had been in place for over two years, resulting in a number of participants feeling that this meant that ISPs had been 'hiding' this information from them. This in turn encouraged a number of participants to think that differential traffic management policies were a 'ploy' for ISPs to pass on additional costs to consumers. At their core, these reactions were a result of a wider lack of awareness around traffic management.

However, when asked in the quantitative research how much of the information or materials they read or heard when they signed up to their current ISP, many had read little or none of the information available to them

- 31% of those responsible for their internet selection admitted to having not consumed any material. This included not picking up information through advertising or information given at the point of sale. C2DEs were significantly less likely to have consumed any material regarding their services (ABC1 65%, C2DE 50%).

5.4.3 Lack of education about how broadband works

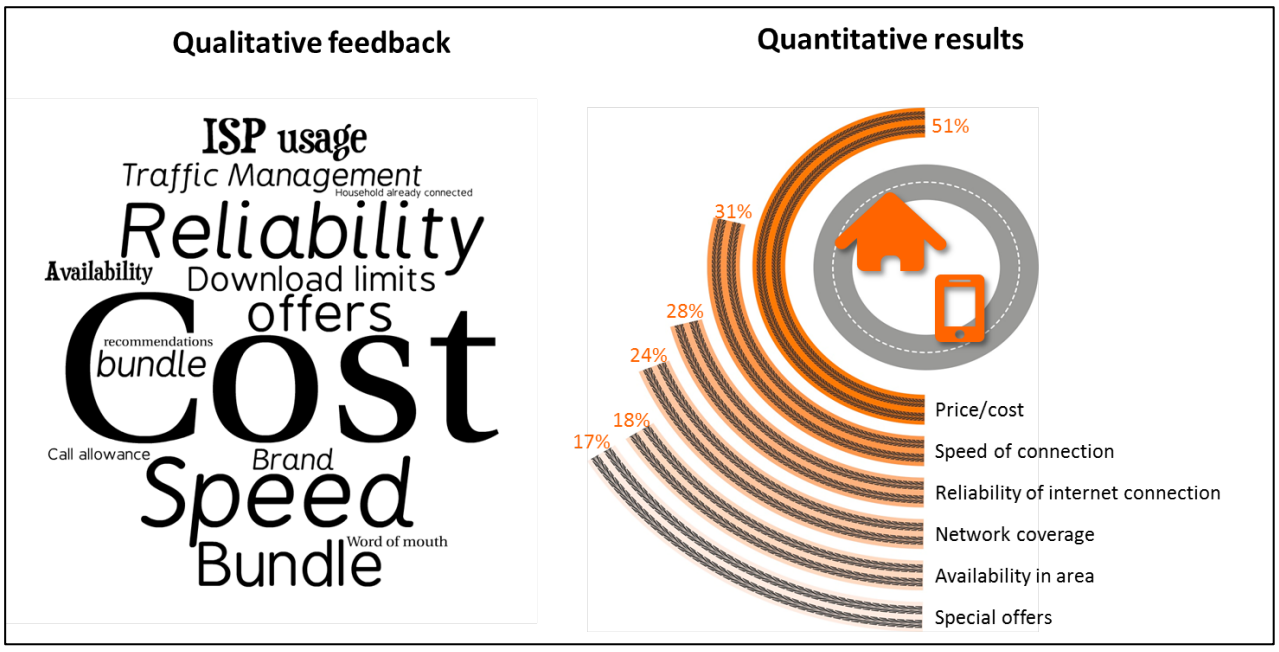
Within the qualitative workshops it came to light that, as well as lack of awareness of the term, consumers were unaware of the reasons that traffic management processes were needed. It was clear that most were not aware of the underlying processes supporting the internet or how it operates. In order to explain traffic management processes this initial knowledge gap had to be filled to aid comprehension of traffic management processes and facilitate a meaningful discussion.

The qualitative research suggests that providing consumers with contextual information helps demystify assumptions around such information being overly technical or not relevant. Once consumers were provided with a wider context around **why** these measures are in place, this encouraged much greater engagement with existing information sources, including KFI tables.

5.5 The role of traffic management in future purchasing decisions

Figure 5.5A shows the factors that consumers claimed they would consider in future selections of ISPs, having been explained the processes of traffic management, based on both the feedback from the qualitative feedback and the quantitative results.

Figure 5.5A: Future purchasing drivers for fixed broadband services



Base: All 16+ in the UK with broadband in home or a mobile phone with internet (n1626)

Even after an explanation of traffic management was given, in the quantitative research, only 6% claimed they would consider this when choosing their ISP in future.

The qualitative workshops provided an opportunity to immerse participants in internet traffic management through a process of education and deliberation to investigate what role, if any, it would play in their future decisions. At the end of the sessions, participants were asked to consider what they had been told about traffic management and whether this would play a role in future purchasing decisions.

Those currently experiencing persistent problems with their internet connections (and who were previously unaware of traffic management policies) were those most likely to state that traffic management is likely to be one of the considerations (rather than a key driver) in future purchasing decisions.

Table 5.5B below shows a table of the sentiments regarding traffic management in internet selection choices amongst the qualitative segments.

Table 5.5B: Summary of changes to purchasing behaviours as a result of raised awareness of traffic management

Segment	Pre-workshop role of TM in purchasing decisions	Post workshop role of TM in purchasing decisions
Digital strangers	No role	Aware that unlikely to be relevant to them as 'light' traffic internet users – may consider but will not drive purchasing decisions.
Persisters	No role	More likely to be taken into consideration rather than driving decision but expectation that ISP will proactively inform of policy
Fingers burned	Considered among other factors in decision making	Will play elevated role in decision making as part of needs based purchasing decision
Knowledgeables	Key role in decisions making	Key role in decision making

6. Key fact indicators

6.1 Summary of findings

Increasing awareness and accessibility of traffic management information

- Of the 9% of consumers who were aware of their ISP's traffic management policy, **73% of those claimed that this information was easy to understand.**

Principles for increasing accessibility of existing KFI information

- Consumers identified a **number of changes to existing KFI information** that would aid their understanding of traffic management policies, such as:
    - **Avoiding text dense formats** and **using friendly, lay tones** to explain traffic management hold particular appeal to consumers
    - Using **consumer friendly terminology** and **avoiding use of technical measures** (e.g. megabytes) without putting these in the context of usage (e.g. hours of streaming)
    - **Keeping KFI tables simple**, and **avoid using ambiguous symbols** makes information easier to process

Preferences around traffic management information sources

Once informed about traffic management, consumers state a preference for information being provided in **online formats** and by **3rd party independent** sources (e.g. comparison sites)

- **Comparing traffic management information**
- **Post purchase traffic management monitoring features appeal** a**s they help** demystify the **abstract concept of** traffic management and make it much more meaningful to consumers

6.2 Increasing awareness and accessibility of traffic management information

As indicated in the previous chapter, the biggest macro issue around traffic management information is lack of awareness, not only in the term and processes of traffic management but also the underlying way that the internet works. As a result, existing KFI tables and information tends to remain hidden from consumers when making their ISP purchasing decisions. The quantitative research found that, of the 9% of broadband internet users who were aware of their ISP's own traffic management information, a large proportion (73%) found the information easy to understand. This suggests that the current information is fit for purpose. However, we must acknowledge that the 9% who were aware were more likely to be the more frequent, tech savvy internet users – in essence those who had already crossed the knowledge gap.

The qualitative workshops provided an opportunity to test existing information, provided by ISPs, amongst the whole broadband internet user population. This included those who were previously unaware of traffic management and internet processes; the consumers for which the KFI information will become of greater importance should the processes of traffic management become more widely known. Within the workshop sessions the KFI information was tested to see whether, in their current format, information provided was understandable, appropriate and comparable in line with requirements set out in the BSG code of practice.

BSG code of conduct requirements for traffic management information

- **Understandable** – avoiding jargon and using clear language to describe traffic management practices;
- **Appropriate** – ensuring the level of detail of information provided is adequate for varying needs of different consumers e.g. headline information followed by additional detail;
- **Comparable** – provided in a consistent KFI table format to allow increased ease of comparison between services within and across ISPs;
- **Accessible** – avoiding the inconsistent use of terminology and the omission of, or lack of clear sign posting, to KFI information;
- **Current** – ensuring customers are kept up to date about any changes to policies that may impact their broadband products both quickly and using an appropriate method;
- **Verifiable** – upholding an independent assessment of practices to assure consumers.

Participants were provided with examples of traffic management information and KFI tables[21] from the main fixed and mobile ISPs The information tested covered 91% of the fixed ISPs and 82% of the mobile ISPs used, as determined by the quantitative research, details of the breakdown can be found in table 6.2 below.

Table 6.2: List of providers where traffic management policies were tested and proportion of total internet consumers derived from the quantitative research

TM/KFI examples used (fixed ISPs)	Proportion of total fixed ISP consumers	TM/ KFI examples used (mobile ISPs)	Proportion of total mobile ISP consumers
BT	21%	O2	28%
Sky	26%	3 Mobile	10%
Virgin Media	23%	Orange	14%
Talk Talk	15%	Tesco	4%
Plus Net	3%	T-mobile	9%
Orange	4%	Vodaphone	16%

Base: All 16+ in the UK responsible for a broadband provider (n1048) mobile phone (n1567)

The information was presented in paper form, but retained the same structure and flow as laid out on ISP websites to reflect the website flow of information provided. From the feedback given, it was possible to identify examples of **existing good practice** as well as examples of where participants had **problems understanding the information** presented to them. Examples of all ISP traffic management stimulus materials that were used are provided in the appendices of this report.

6.3 Principles for increasing accessibility of existing KFI information

The following sections outline feedback from the testing exercise.

6.3.1 Having an introduction matters

Introductory, explanatory text provided prior to the KFI data table was welcomed by participants. Having such text that provided some context around what traffic management was and why the measures were in place (or no measures if services were not being traffic managed) was particularly appealing given that, as consumers, this was information that most were seeing for the first time. However, where such an

[21] All examples for traffic management were taken from the internet between 17th and 18th March 2013

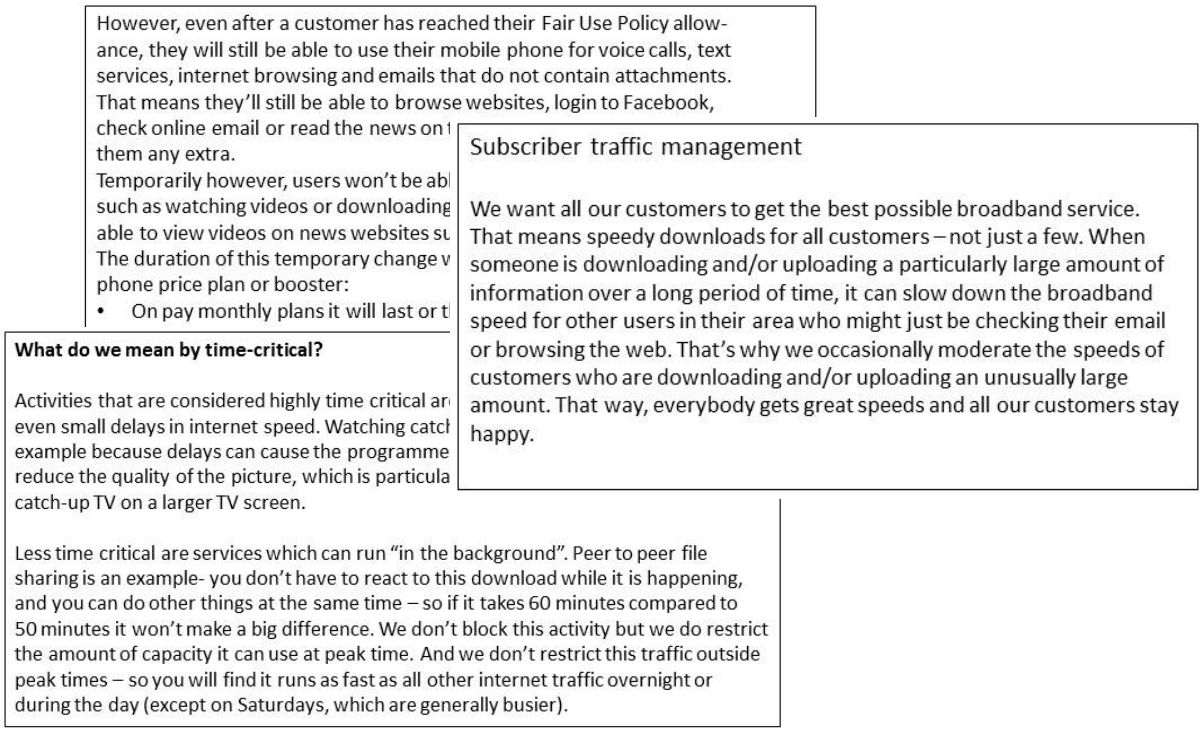
introduction was omitted (as in the case for all mobile ISP KFIs), it **made it more difficult for participants to take an interest in and engage with the table format of KFI information.**

6.3.2 Layout matters as much as content

Layouts where **headline information is provided upfront**, with the **option** of then reading further for additional detail held broad appeal across the workshop sessions. For more passive consumers in particular, being told this headline information was sufficient for what they felt they would need to know about the traffic management policies of their internet service.

There was also a general reluctance around engaging with examples where introductory, explanatory information was presented as a **paragraph of dense text**, such as the example illustrated in figure 6.3.2A below. Visually, such layouts reinforced pre-existing assumptions that traffic management information would be dull, difficult to digest and 'not for me'. **As a result, many participants noted that they would be unlikely to bother reading information when presented in this format**.

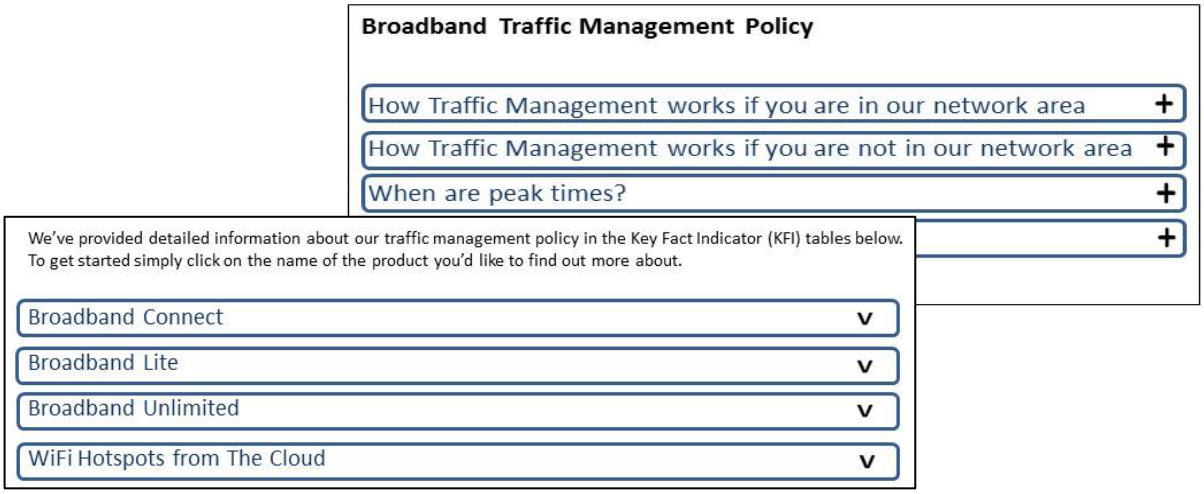
Figure 6.3.2A: Examples of text dense formats



However, in contrast, where such introductory explanatory information was formatted through the use of **bullet points, headings, and well-spaced sentences rather than paragraphs, there was a greater motivation among participants to engage** with the written content, as it looked less daunting to

negotiate. The two examples in figure 6.3.2B are illustrative of layout that was seen to be visually appealing.

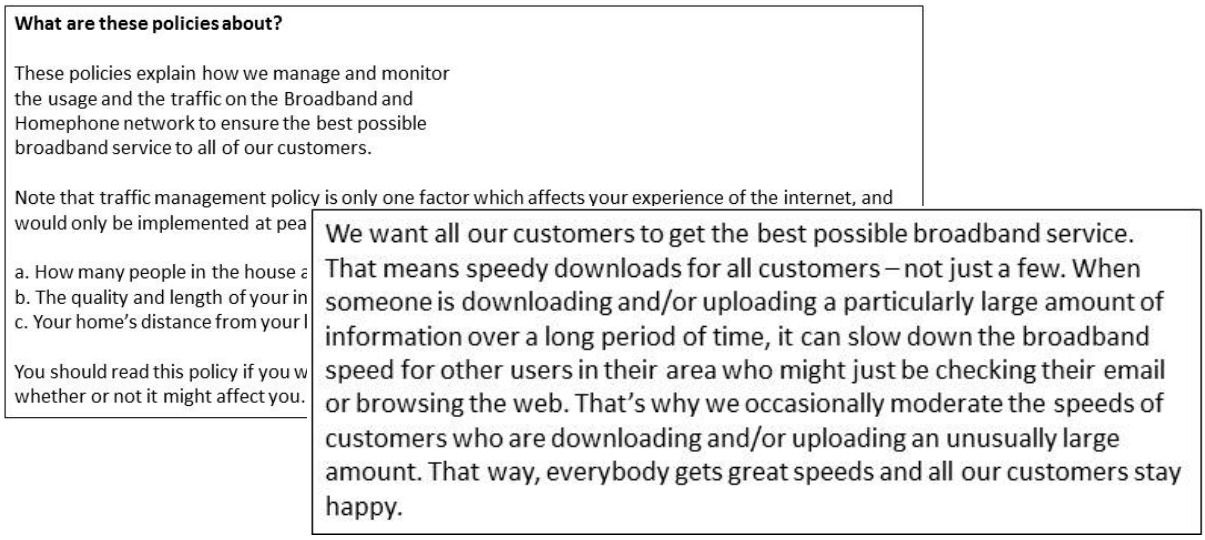
Figure 6.3.2B: Examples of visually appealing layouts



6.3.3 Tone matters

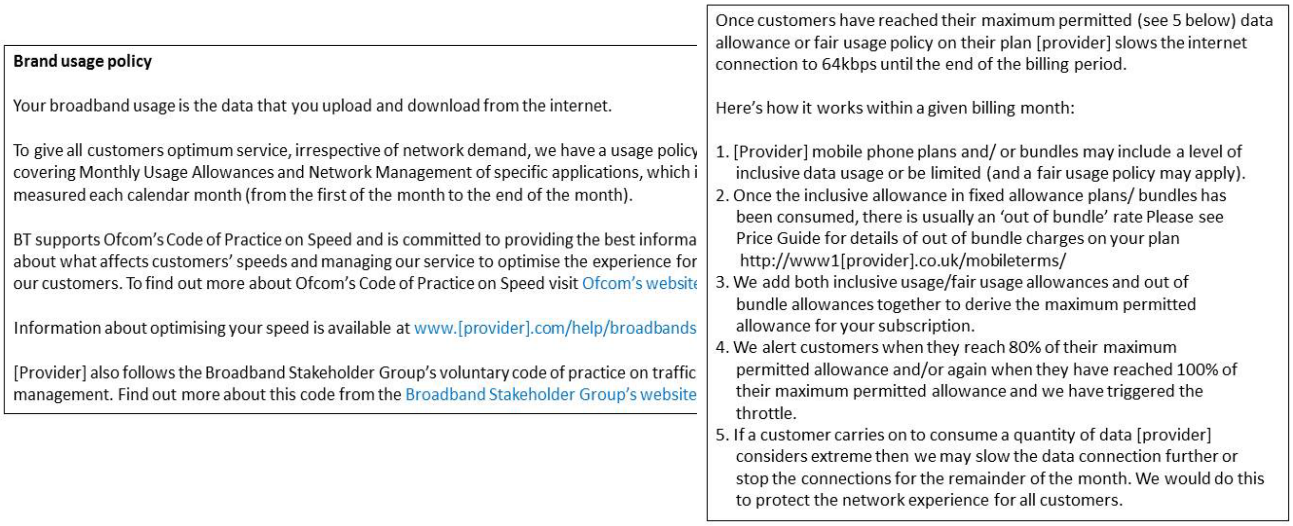
The tone used, whether this was in the prior explanatory text or within the KFI tables themselves, is important in encouraging consumers to engage with traffic management information. **Conversational, lay language**, as in figure 6.3.3A below, had widespread appeal across the workshops; primarily as such tones not only help to reassure and engage the reader, but they are also instrumental in **helping demystify assumptions around traffic management being difficult to understand.** Similarly, a number of participants expected this information to be presented in their ISPs own language associated with the wider brand identity.

Figure 6.3.3A: Examples of appealing tones



Conversely, **overly formal, corporate or technical tones were broadly disliked by consumers**. Like dense text formats, information presented in these tones disengage the reader and reinforce the view, especially among more passive consumers, that such information is **'not meant for me'**. In figure 6.3.3B below are examples identified by participants that were seen to be a turn off as a result of their tone.

Figure 6.3.3B: Examples of disliked tones



Brand usage policy

Your broadband usage is the data that you upload and download from the internet.

To give all customers optimum service, irrespective of network demand, we have a usage policy covering Monthly Usage Allowances and Network Management of specific applications, which i measured each calendar month (from the first of the month to the end of the month).

BT supports Ofcom's Code of Practice on Speed and is committed to providing the best informa about what affects customers' speeds and managing our service to optimise the experience for our customers. To find out more about Ofcom's Code of Practice on Speed visit Ofcom's website

Information about optimising your speed is available at www.[provider].com/help/broadbands

[Provider] also follows the Broadband Stakeholder Group's voluntary code of practice on traffic management. Find out more about this code from the Broadband Stakeholder Group's website

Once customers have reached their maximum permitted (see 5 below) data allowance or fair usage policy on their plan [provider] slows the internet connection to 64kbps until the end of the billing period.

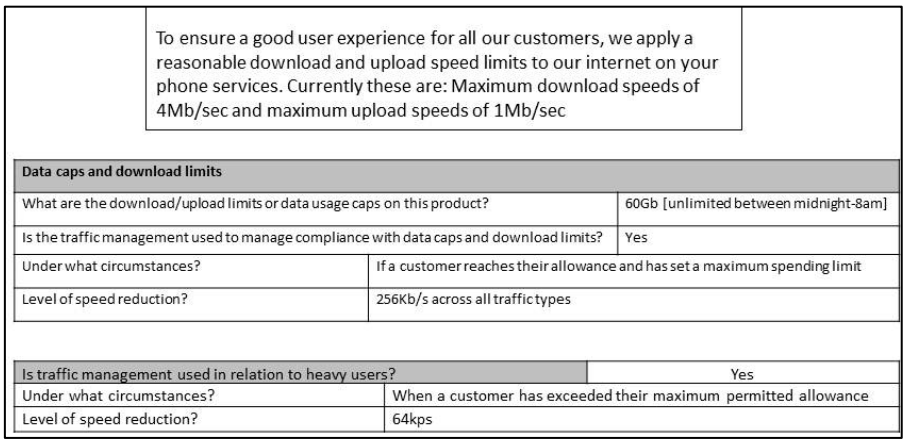
Here's how it works within a given billing month:

1. [Provider] mobile phone plans and/ or bundles may include a level of inclusive data usage or be limited (and a fair usage policy may apply).
2. Once the inclusive allowance in fixed allowance plans/ bundles has been consumed, there is usually an 'out of bundle' rate Please see Price Guide for details of out of bundle charges on your plan http://www1[provider].co.uk/mobileterms/
3. We add both inclusive usage/fair usage allowances and out of bundle allowances together to derive the maximum permitted allowance for your subscription.
4. We alert customers when they reach 80% of their maximum permitted allowance and/or again when they have reached 100% of their maximum permitted allowance and we have triggered the throttle.
5. If a customer carries on to consume a quantity of data [provider] considers extreme then we may slow the data connection further or stop the connections for the remainder of the month. We would do this to protect the network experience for all customers.

6.3.4 Use consumer friendly metrics and terminology

Across workshops, one of the biggest barriers to increasing understanding around existing information related to the **use of technical and numerical 'industry' terms, especially within KFI tables**, when outlining traffic management policies. Participants identified that, across several examples, reference was made to **download speeds and data limits in megabytes without any accompanying explanation** as to what a **megabyte** equates to in terms of different online activities. The examples provided in figure 6.3.4A are illustrative of this type of information that participants had difficulty in making sense of.

Figure 6.3.4A: examples of assumed technical knowledge



To ensure a good user experience for all our customers, we apply a reasonable download and upload speed limits to our internet on your phone services. Currently these are: Maximum download speeds of 4Mb/sec and maximum upload speeds of 1Mb/sec

Data caps and download limits	
What are the download/upload limits or data usage caps on this product?	60Gb [unlimited between midnight-8am]
Is the traffic management used to manage compliance with data caps and download limits?	Yes
Under what circumstances?	If a customer reaches their allowance and has set a maximum spending limit
Level of speed reduction?	256Kb/s across all traffic types

Is traffic management used in relation to heavy users?	Yes
Under what circumstances?	When a customer has exceeded their maximum permitted allowance
Level of speed reduction?	64kps

For many participants, information about limits for traffic management restrictions presented in this way was seen as problematic as they had **no point of reference to be able to put these figures into meaningful context**. In particular, this made it difficult for them to determine whether they fell into the category of **heavy users**. However, when these figures were accompanied with examples of what' X' MB meant in terms of usage or online activities, participants were then able to make sense of this information in a way that was meaningful to them. Figure 6.3.4B provides examples of where good practice was identified.

Figure 6.3.4B: Examples of technical information provided in context

How do I know if I'm a heavy user?
The table below and the example that follows will help you understand what we classify as heavy usage:

File/activity type	Approximate size
Music track	4MB
Movie	700MB
30 minutes streaming on YouTube (at 800kbps)	175MB
HD movie	4000MB

As an example, a size: XL customer on our 60MB service can download 5,000MB between 5pm and 10pm on a weekday before they are traffic managed. During this time that customer would have to download 7 standard definition movies or 1,250 songs before a 5 hour temporary speed reduction was applied, and even then they can of course continue to browse the web and use services like the iPlayer without interruption.

Level of speed reduction?	Approx. 90%
Duration of speed reduction?	Peak hours only – typically 4pm to 11pm

Similar issues were raised about some of the **traffic based terminology used in the standard KFI table**. While those within the 'knowledgeables' segment were familiar with the terms used to describe types of internet traffic, most other participants were unclear as to what examples of traffic would be defined as **newsgroups or VOIP**. However, when examples of services were provided, such as RSS feeds or Skype and Facetime, consumers were able to understand what activities would be impacted.

Figure 6.3.4: Examples of technical traffic terminology

Section 2: Traffic management to optimise network utilisation (what happens during busy times and places in addition to traffic management as described in section 1)			
Is traffic management used during peak hours?			N
When are typical peak hours?	Weekdays:		Weekends:
What type of traffic is managed during these periods? ***			
Traffic Type	*Blocked*	*Slowed down*	*Prioritised*
Peer to Peer (P2P)			
Newsgroups			
Browsing/email			
VOIP (Voice over IP)			
Gaming			
Audio streaming			
Video streaming			
Music downloads			
Video downloads			
Instant messaging			
Software updates			
Is traffic management used to manage congestion in particular locations?			N
If so how?	The same practices are applied during peak hours		

Related to the above points, participants did not understand the logic where the location of glossary definitions came **after** KFI tables and felt that having this information up front would be of greater benefit in helping them interpret and understand the various terms used by ISPs within their policies. Where possible, participants also liked the idea of being able to hover over terms to reveal definitions of words used that they were unsure of, but views were mixed on use of hyperlinks for this purpose. While some felt this would be a suitable compromise, others did not like the idea of being diverted to a different location away from the information they were trying to understand.

6.3.5 Avoid populating tables with ambiguous markings

A further observation made by participants related to how KFI tables information was presented. In particular, **the use of crosses led to some confusion as to what the information in the tables was telling them**. For example, in the tables presented below, the use of crosses led participants to question whether this meant that Peer to Peer traffic was not slowed down as they were used to associating crosses with the word 'no'. Participants mentioned that they would feel more comfortable if straightforward language of 'yes' or 'no' (where appropriate) was used in helping them interpret the information provided to them via KFI tables. Similarly, excessive use of blank spaces within tables were mentioned as a dislike by a number of participants for the same reason.

Figure 6.3.5: Examples of tables using crosses

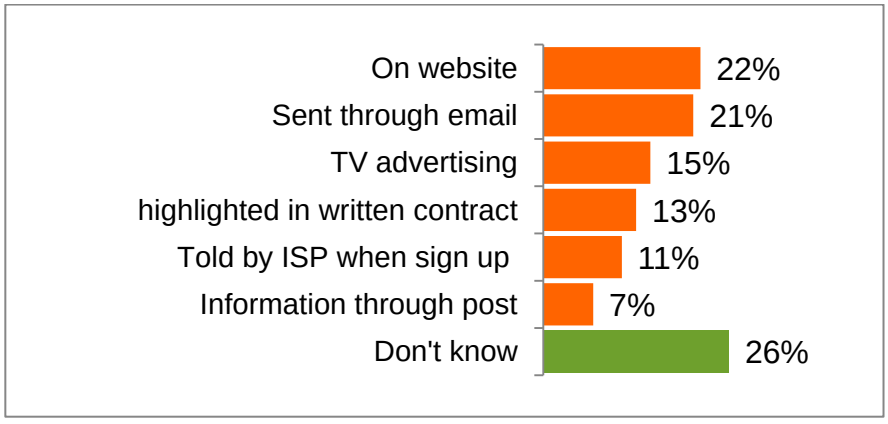
Section 1: Traffic management in relation to your broadband product (not including during busy times and places to manage network congestion see section 2)	
Name of broadband product	
Use and availability of services, content, application and protocols on this product	
Are any services, content, applications or protocols blocked on this product? **	X
If so what?	-
Are any services, content, applications or protocols always slowed down?	X
If so what?	-
Are any services, content or protocols always prioritised?	X
If so what?	-
Are any managed services delivered on this product?	X
If so what? What impact?	-
Data caps and downloads	
What are the download\upload limits or data usage caps on this product?	Uncapped Service
Is traffic management used to manage compliance with data caps and download limits?	X
Under what circumstances?	-
Level of speed reduction?	-
Duration of speed reduction?	-
Is traffic management used in relation to heavy users?	✓
Under what circumstances?	We manage downstream traffic each day between the hours of 10am to 3pm and 4pm to 9pm. We manage upstream traffic between the hours of 3pm to 8pm. This typically impacts less than 5% of users per day and ensures the vast majority of customers have a great online experience when they want to use the internet the most.
Level of speed reduction?	75%
Duration of speed reduction?	5 hours

	Yes		
	Sunday – Friday 5:30pm to 10:30pm Saturdays and Bank Holidays 12:00 (noon) to 10:30pm		
	Blocked	Slowed Down	Prioritised
		x	
		x	
			x
			x
			x
			x
Video downloads			
Instant messaging			
Software Updates and Downloads		x	
Network Storage		x	
Is traffic management used to manage congestion in particular locations?	No		
If so, how?	N/A		

6.4 Preferences around Traffic Management information sources

The quantitative research showed that there was a preference for the KFI information to be supplied in a digital form. Chart 6.4 below shows the top methods by which consumers wish this information to be supplied to them.

Chart 6.4: Preferred locations/methods for KFI information to be supplied



Base: All 16+ in the UK with broadband in home or a mobile phone with internet (n1626)

Whilst most consumers wanted this information to be provided on the website (22%) or through email (21%), more notably over a quarter of internet users (26%) do not know where they would like this information to be made available.

Most participants, especially among the '*Persisters'* and *'Fingers Burned'* segments, **expected that traffic management information would be accessible on their ISP's website**. However, given the issue around lack of awareness about traffic management generally, there was an assumption that such information would most likely be found in the small print, **'hidden away'** in the terms and conditions sections of websites or generally difficult to find.

After deliberation and once awareness of traffic management increased among participants, most felt that having **this information displayed in a more prominent position on their ISP's website, with clear signposting would be sufficient for their needs.** However there was some suggestion across workshops for some of the older *'Digital Strangers'* that their preference would be to also have this information sent to them **in the mail** as they tended to have an expectation that, if the information was an important part of their service, then ISPs would contact them in this way.

Among participants who tended to be more passive in terms of researching their broadband purchases, being informed of their ISP's traffic management policy at the **point of sale was preferable**. In such instances, there was an expectation that the sellers of the broadband product should proactively inform customers of this information. Notably, a number of younger, mobile internet users stated that they would prefer to see this information listed, in written form, alongside tariff information where purchases were made in mobile phone outlets. However, for this information to be meaningful it was expected to be in **straightforward, understandable and bulleted format** so it was easily accessible for customers to take account of when making their purchase.

6.5 Comparing traffic management information

In addition to testing existing traffic management information across a range of ISPs, the workshop sessions also provided an opportunity to explore consumer preferences of comparative formats for this information. While the quantitative research revealed that only 3% of respondents stated a preference to

get information from comparison websites, this was received much more positively in the qualitative workshop sessions[22].

Across the workshops there was **broad agreement that being able to compare ISP traffic management policies prior to purchase would be useful**, especially among those who either had previously experienced problems with their fixed broadband service, or those who were currently experiencing issues and suspecting their problems could be down to traffic management measures. However, even those who felt that traffic management policies were still likely to play a peripheral role at most in their purchasing decisions still liked the idea of having a source to compare information that they could access if it ever became an increased issue for them in the future.

From discussions within the workshops, two themes around preferences for comparative information provision emerged. These were obtaining information from familiar online comparison formats and the importance of independent, 3rd party provision.

6.5.1 Familiar online comparison formats

Nearly all participants in the workshops were familiar with using price comparison sites, and as a result this framed their preference for being able to research different ISP traffic management offers in the same way. Being able to **pre-select certain criteria (such as activities undertaken online and number of people in the household) before then being routed to the most appropriate service for their needs** was the core expectation of how they would expect to obtain comparative information. A particular appeal of this approach was the perception that it would require minimal technical knowledge on behalf of the participant in helping them identify packages that would be more suited to their needs.

6.5.2 Independent sources

Although most participants expected individual traffic management information to be provided on their ISP's website, there was a general preference expressed across the workshops that comparison information should be provided through more objective sources, such as third party and/ or independent websites such **as uSwitch, Which?** and **Martin Lewis's money saving website**. This preference tended to be driven by the view that (a) it would make it easier to compare multiple ISP offers and (b) the

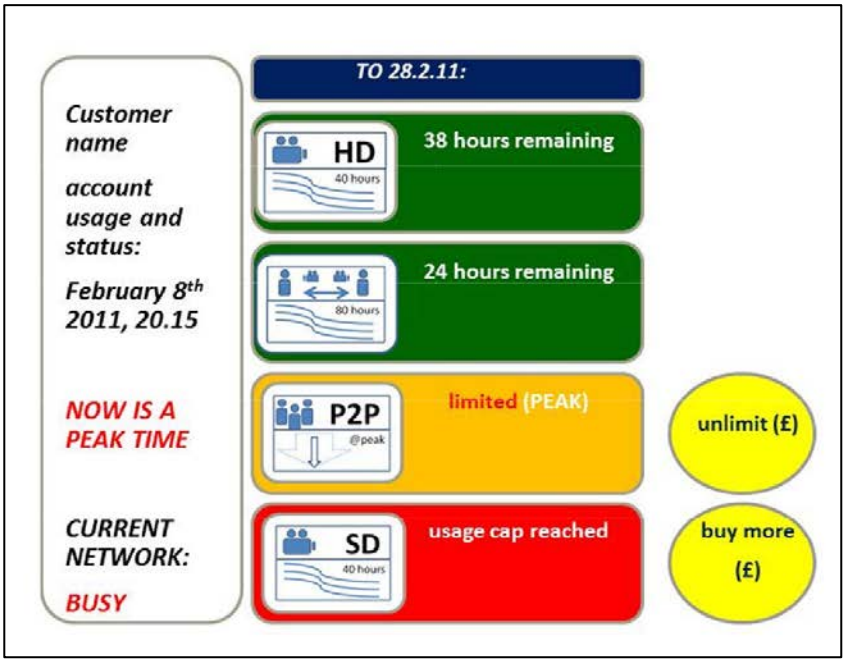
[22] A probable reason for this difference was the increased amount of time participants had in the workshops to engage with examples and deliberate around the issue of comparative data compared to the quantitative research

information provided would be more transparent. Across participants there was a general view that having information provided through a third party source would **remove any potential 'bias' in terms of how individual ISPs may pitch their traffic management policies.**

6.5.3 Post purchase traffic management information sources

The workshops also provided an opportunity to test potential post purchase traffic management information sources. This involved using stimulus to describe a way of monitoring the data usage of online activities through a 'dashboard' like set up, shown in figure 6.5.3 below.

5.3: Post purchase traffic management feature



This feature, which would allow customers to monitor their actual usage, held widespread appeal, primarily **as it had the potential to help participants make sense of traffic management measures in a way that was directly relevant to them and their households**. It was of particular interest to those who lived in households where more than two people were using the internet, such as parents and those living in multiple occupancy set ups (such as students, flat shares) as it provided a means of helping the bill payers to monitor usage, which would then also enable them determine if they were on the most suitable package for their needs.

Having this feature delivered in either app, website or as a desktop toolbar icon format appealed to participants. On the whole, there was a preference for this information to be an '**opt in'** – that is being accessible to users as and when they wanted to check information – rather than opt out. However, alongside this there was also a preference that users would be alerted proactively by any such feature if

they were close to being traffic managed as a result of their online activities. Notably, irrespective of particulars around the format of such a feature, **there was a strong message that participants would be unwilling to pay for this service and that it should be provided free of cost by ISPs.**

7. Appendix

7.1 Workshop discussion guide

Objectives:

- To understand broadband purchasing choices (including drivers and barriers) across both fixed and mobile broadband internet connections
- To explore customers experiences with their broadband services (e.g. positive, negative, neutral) and whether their service is meeting their expectations
- To understand the role of traffic management policies in terms of (a) existing customer awareness (b) the current and potential role of traffic management policies influencing purchasing choices and (c) devising a working definition of traffic management through the language and terminology used when discussing this concept.

Table 5.3 below give an overview of the discussion guide for workshops 1-7, with a more detailed breakdown of the discussion guide in figure 7.1B. The total length of each workshop was 3.5 hours and was carried out between 6.30-10pm.

Table7.1A: Workshop content overview

1. Introduction	Introductions, cover off housekeeping, confidentiality, structure of session. In particular inform participants that the session will involve a degree of learning alongside discussion and that, crucially, there are no right or wrong answers.
2. Broadband product choices	This section will get participants to reveal the drivers behind their decision to purchase their broadband internet service(s) as well as understanding the hierarchy of factors involved in the decision making process. This section will be the first part of the discussion where we will begin to see the role (or non-role) of TM in decision making.
3. Broadband provider experiences	This section explores what kind of activities participants are undertaking on their internet connection, the frequency, depth and, where relevant, whether behaviour differs depending on mobile or fixed connection. This section also aims to understand expectations around internet service providers and how this plays out in reality. It also identifies any particular issues customers may be having with their internet service and how they seek to explain any issues or problems they are having.
4. Stimulus session	Participants introduced to stimulus
5. Working break	Participants given break to read over stimulus
6. Q & A	Q & A about internet traffic management
7. Internet traffic management	This section focuses upon the top of mind expectations participants have about traffic management and in particular where they would expect to find it and how they would expect this information to be provided to them
8. Internet traffic management – practical session	In this section participants are exposed to a number of anonymised KFI documents and asked to, as a group, evaluate them in terms of good + bad practices (e.g. language, terms, examples used, format, level of info etc) and why certain elements work well/ not so well

9. Future KFI information examples	In this task based section participants will be shown example stimulus and asked to comment on various elements of what each involves (e.g. use of images, clarity etc) and will then be asked to identify what their priorities would be around how traffic management information is presented.
10. Returning to broadband product choices	This final section asks participants to re-visit their broadband product purchasing choices and see what, if any, role increased awareness of TM policies will likely play on their future purchasing decisions.
11. Thank and close	

Table7.1B: Discussion guide

Time	Introduction	Notes
10 mins	**All participants in same room** **[lead moderator]** • Welcome participants and thank for agreeing to take part. • Kantar Media as independent company • Session structure – here for 3.5 hours – will be told lots of information and everyone expected to contribute to discussions • No right or wrong answers – will be introduced to some terms and ideas that will be new, so make sure ask you questions even if you think the answer might be obvious to others...ASK! • Housekeeping: Fire exits, toilets, mobile phones off. • Split up participants **Splitting participants:** Glasgow & Belfast: group will be split by whether they are predominately mobile or fixed broadband users London (1), Leicester, Manchester and Swansea – the group will be split by age – younger and older. Note: participants wearing a **GREEN** sticker = light internet users, Participants wearing a **RED** sticker are heavy internet users.	
6.40 – 7.10pm	**Broadband choices**	PARALLEL (one group)
30 mins	**Parallel session 1 [participants in separate groups]** **Participant introduction – ask name and their favourite piece of technology that they own.** Moderator note: Ask participants to bring out their pre-task documents. Who currently supplies your internet service? ***Flipchart responses*** FOR THOSE WITH BOTH FIXED/ MOBILE note down the providers of each service Thinking about your broadband/ mobile phone service generally, how much thought would you say you put into selecting your provider? Probe on: • Whether decision was single or joint • How much research, if any, was done? What did this involve? Web search? Offline search? • Did you speak to anyone? Who? What for? (E.g. specialist advice or experiences?) For those who have both fixed and mobile broadband services ASK: Did the level of thought you put into your decision differ depending on whether it was for in-home broadband or mobile phone service? If different – what is the difference? Why is the decision different? *Moderator note: Ask each participant to reveal the most important factor in their broadband decision making. Note, if participants have both fixed and mobile broadband go through each individually.* ***Tally responses on flip chart.*** Looking back at your pre –task, please tell me what the most important and the second most important factors were in purchasing your broadband choice. For factors presented probe on: • Why was this factor/ these factors the deal breaker(s)?	

	• Why is it more important than other factors? • What factors were less important? Why is that? If you were considering switching your internet provider in the future, would the same factors hold the same importance? If so, why is that? If not, why not? Why would a different factor be more important? Thinking specifically about the issue of 'reliability', where does this figure in your decision making? When you think about the term 'reliability' in relation to the internet what are you thinking about? What does a 'reliable' internet service look like in practice? What are your expectations of what a reliable service would provide? ***Flip chart responses***	
7.10pm – 7.25pm	**Broadband provider experiences**	PARALLEL (one group)
25 mins	*Moderator note: Repeat questions for those who use both fixed and mobile internet connections.* What tasks do you tend to do on the internet? Which ones do you do most frequently? Which ones less frequently? Why is that? ***Flipchart responses*** <u>FOR THOSE WHO USE BOTH FIXED/ MOBILE:</u> Are there any differences between what you do on the internet via your fixed in-home connection and your mobile connection? What are these? Why is that? Which one do you tend to use more? Why? ***Flipchart responses*** What expectations do you have in relation to your internet service provider? Probe on: - Reliability - Speed of connection - Being able to watch TV/ video services without interruption - Do you think that your internet service provider meets your expectations? Why do you say that? If you could use one word that best describes your experience with the company that provides your internet service what would that be? ***Flipchart responses.*** - If experience is POSITIVE – what makes it a positive experience? If experience is NEGATIVE – what makes it a negative experience? <u>FOR THOSE WHO USE BOTH FIXED/ MOBILE</u>: Has your experience of the providers of your fixed and mobile internet service differed? If so, why do you say that? In what ways has it differed? What, if any, problems or issues have you had with your internet service? ***Flipchart responses*** Probe on: - Slow connection - Buffering when watching TV/ video content - Running out of data allowance (on mobile) - Taking longer to access certain websites than normal - A service or application is not available (i.e. access is specifically blocked by the provider) - Other For each problem mentioned: Ask if other participants have experienced similar issues. If so: do you notice this problem affects (a) any sites in particular and/ or (b) particular times of the day? If so which ones/ when? What do you think may be causing this problem/ these problems? Why do you say that? Moderator note: Do a quick round table hand count and record on the following: How many of you around the table have heard of internet traffic management? - For those who have not heard of it ask what they think it means - For those who have heard of it ask them to describe what they think it is o where/how did they hear about it? o in what context? *Moderator note: After discussion is completed bring participants back together into the main room.*	
7.25 – 7.45	**Stimulus session**	PLENARY (both groups)
20 mins	**All participants in the same room** - 2nd moderator to distribute paper **stimulus pack A** before presentation begins - Lead moderator to talk through stimulus pack.	

	- Ensure session is done slowly to allow participants to think - Tell participants to note down any questions they may have during the presentation and these will be answered at Q & A session after comfort break	
7.45 – 8.00	**Working break**	PLENARY (both groups)
	- Ask participants during the break to read through the stimulus pack and identify anything they are not sure about – this may be words, phrases or examples - Ask to reconvene as one group in same room	
8.00 – 8.15	**Q & A session**	PLENARY (both groups)
	Opportunity for participants to clarify/ ask questions around the issue of traffic management	
8.15 – 8.35	**Internet Traffic Management**	PARALLEL (one group)
	Moderator READ OUT: For the remainder of the evening we are going to discuss internet traffic management Now that we have introduced you to internet traffic management, does anyone think they may be able to explain the issues they have had with their broadband internet services? If so, what do you think might be explained by traffic management policy? Did anyone take their ISP's traffic management policy into consideration when deciding to purchase their your broadband internet package? If YES – what role did this play in decision making? If NO – what impact, if any, would these policies have upon decision making? Why do you say that? If aware of TM, did you understand your ISP's policy? How did you become aware? Were you able to find it easily? For those not aware- Now that you are aware of these policies, where would you expect to find this information? Probe on: Front page of website – where? Why? Elsewhere on website – where? Dedicated section? Within terms & conditions section? Somewhere else? Why? At point of broadband internet service purchase? Should it be opt in (where you need to go looking for it) or opt out information (explicitly presented to you by your ISP?) Level of information? If so probe on issue of more detail v info overload How would you expect this information to be presented? Probe on: Format Topline information?(e.g. we will speed X up/ slow Y down) More detail?– if so, what? Why is detail important? - Impact of TM on different internet packages - Detail around speeds being slowed - Other – what would this be?	
8.35– 9.10	**Internet Traffic Management – practical session**	PARALLEL (two mini groups)
	Moderator note: Split participants into two mini groups. Make sure that there is at least one person from each main service provider in the mini groups – refer to recruitment info. Issue each group with: - **Stimulus pack B**: KFI info set 1- 4– give one set each to each mini group - Selection of red and green dotted stickers - Instruction sheet READ OUT: In your groups you will see that you have a pack. This contains existing internet traffic management policies by internet service providers. We would like you to read through the different policies and identify: **GOOD PRACTICES** e.g. - Words/ phrases that are clear and easy to understand - Descriptions that work well in explaining what they mean - Anything else that you think works particularly well in explaining the policy **BAD PRACTICES** - Words/ phrases that are not clear/ difficult to understand - Descriptions that confuse you	

	- Anything else that leaves you asking questions/ scratching your head! For examples of good practice – mark these with a GREEN DOT. For examples of bad practice mark these with a RED DOT. Also, feel free to write comments around the examples to say what you like/ dislike. Don't worry if you do not agree as a group – you can put a red and green dot next to each other and tell us why when we discuss it. Over to you! *Moderator note: this exercise should take around 20 mins* When feeding back, ask participants to feed back on each KFI example. For practices identified either as good/ bad – for each one ask WHY the feedback is good/ bad and ***flipchart responses***	
9.10 – 9.45	**Future KFI information examples**	PARALLEL (one group)

	Moderator note: This final exercise is aimed at getting participants to discuss the preferred format/ wording/ location of KFI information. It should be kept lively as it is likely that participants are getting tired at this point. ***DISTRIBUTE STIMULUS PACK C TO EACH PARTICIPANT***
	
	READ OUT: For this exercise you have been asked to advise ISPs on how they should best provide this information to customers that will make it more appealing for people like you. We have some examples we would like you to look at.
	
	Stimulus CA – comparative internet traffic management example
	READ OUT: Imagine you were thinking of **buying or switching** broadband/ mobile internet when you are looking at this example.
	
	Prompt on:
	- Would this information be something you would find useful? Why do you say that?
	- Does information in this format appeal? Why?
	- Where would you expect to find this information?
	  - Third party site
	  - On ISP site
	  - Front page of site/ specific labelled section – but not front page/ help and support section? Why?
	- Are the images used to represent the different functions/ activities in the key clear? Would you change any? If so, what to? Why?
	- How important would it be for all ISPs to use the same icons? Would this matter? Why do you say that?
	
	Stimulus CB: Same as A, but with stars replacing the text
	
	Prompt
	- Is the meaning of the star ratings clear?
	- Which do you prefer – the text titles or the star ratings? Why?
	- Could star ratings play any additional role on how this information is presented to you through icons? Why do you say that?
	
	Stimulus CC – Network performance
	READ OUT: Imagine you wanted to check up on how your **internet network** was performing overall when you are looking at this example
	
	Prompt on:
	- Would this information be something you would find useful? Why do you say that?
	- Does information in this format appeal? Why?
	- Where would you expect to find this information?
	  - Third party site
	  - On ISP home page
	
	- Is this information something you would like provided to you or would you rather seek it out yourself if you wanted it? Why?
	
	Stimulus CD – your internet service
	READ OUT: Imagine you wanted to check up on how your own account was performing overall when you are looking at this example
	
	Prompt on:
	- Would this information be something you would find useful? Why do you say that?
	- Does information in this format appeal? Why?
	- Where would you expect to find this information?	

	- Is this information something you would like provided to you or would you rather seek it out yourself if you wanted it? Why? - Third party site - On ISP home page - On your tool bar/ browser/ desktop? Which one(s) appeal, if any, and why? - Only appear (via pop up or push notification) when there was some sort of issue? Stimulus D: Star rating READ OUT: This is a different way of providing KFI information Probe on - Does this format appeal? - How does it compare to other visual (stim C) and text based examples you have seen so far? Why? - Specifically, what appeals and what lacks appeal? Why? Overall how does information provided by images compare to the text examples we looked at earlier? Which one do you prefer? Probe on - Text v image – if there is a preference – why is that? - Does the idea of 'page 1 headline/ page 2 detail' appeal? If so, where do text and images fit here? Thinking about everything we have discussed this evening, imagine that someone in charge of presenting this information was here tonight, what feedback would you give them? Moderator note: Please complete this exercise by **flip charting** responses to the bullet points below, noting any consensus/ disagreements: • **What information should be included?** (types of services affected, when services will be affected, definition of key terms, key, no jargon, likely impact and what this could involve if TM applied) • **Where should information be located**? (webpage – front page, not front page but clearly sign posted, in terms and conditions, sent to you in paper form) • **How should information be presented**? (Text, images, mix of both? What needs to be text based and what information can work as images?) • **How should your ISP tell you about this?** (website only, TV campaigns, Newspaper campaigns, sending a letter) Should it be opt in or opt out in terms of being provided with this information?	
9. 45 – 9.55pm	**Returning to broadband product choices**	
	READ OUT: At the start of the session we asked you to tell us about the important and less important factors involved when you bought your broadband internet service. Now that you have been introduced to internet traffic management and the fact that different internet providers have different policies – where, if at all, would this information play a role in your future broadband services choices? *Moderator note: At this point we need to try and get a 'true' reflection of where this information would fit in decision making (rather than one that may have been inflated with the discussion). If participants place it higher in their decision making that other factors.* **HAND OUT STIMULUS D AND ASK PARTICIPANTS TO COMPLETE IT BASED UPON WHERE TRAFFIC MANAGEMENT IS NOW LIKELY TO FIT** Would it change your top 3 decision making factors? If so how would this change? Which factor would it displace from your top 3? If not, why not? Why is traffic management policy less important than your top 3 choices? - Why is traffic management information more important than the factors below it in your decision making? - Why is it less important than the factors you have placed above it?	
9.55 – 10pm	**Thank and close**	
	Thank participants for attending. Collect pre-task, issue incentive, get signature.	

7.2 Pre-task document

You and the internet

Pre-task

Name: _____

Age: _____

Town/ city: _____

IMPORTANT: PLEASE READ

Welcome!

Thank you for agreeing to take part in this research project with **Kantar Media**. We will meet you face to face at the workshop that you are scheduled to attend but before you come along we would like to complete the questions and exercises in this document.

Completing this document is important in help getting discussions underway in the workshop session. For attending the session you will be provided with a financial incentive of £90. Please note that *to qualify for this full incentive, you **must** complete the questions and tasks in this document and bring it along with you to the workshop.*

Please note that with the questions and tasks in this document **there are no right or wrong answers**. We just want to learn a bit more about you and the internet services that you use.

If you have any questions about this pre-task then please contact the project manager whose details are provided below:

Brian McIntosh **T**: 0207 160 5853 **E**: brian.mcintosh@kantarmedia.com

We look forward to seeing you at the workshop!!

How to complete this document

- If you **only** access the internet through a connection at home (including Wifi) then answer sections A (page 4 - 5), C (page 8) and D (page 9).
- If you **only** access the internet through a 3G or 4G mobile connection then answer sections B (pages 6 -7), C (page 8) and D (page 9).
- If you access the internet through both a connection at home **AND** through a 3G or 4G mobile connection then please answer sections A (pages 4 -5), B (pages 6 – 7), C (page 8) and D (page 9)

You and your internet services

Section A

The following questions relate to your **in-home internet connection** (that is internet that you get through a modem or hub, either through a cable or wifi).

1. Who currently provides your internet at home ?.....
2. How long have you been with this provider? .....
3. Are there particular times of day that you would say you use the internet more than others? When? .....
4. What activities would you say you do most frequently on the internet through your in-home connection? (please rank the activity you do the most with a 1, and then simply tick the others than you do commonly).

Browsing the internet	Sending emails	Download music	Download movies
Instant messaging	Social networking	Peer to Peer file sharing (e.g. Limewire)	Uploading photos
Calling people (e.g. Skype)	Watch/ stream videos (e.g. YouTube, BBC iplayer)	Listen to/stream radio programmes	Online shopping

Selecting your in-home internet service

Section A

For this task we would like you to think about the different factors you considered when selecting your in-home internet provider and rank them in terms of importance when making your choice. We have provided a number of examples of things that may have influenced you, but this is not a full list – if your decision was influenced by something not in the examples do tell us!

Cost	Personal recommendation
Brand Image	TV package in bundle
Reliability of connection	User/ Professional reviews
Speed of connection	Household already connected
Part of bundle	Advertising
Special offers	Word of mouth
Availability in area	Download limits
ISP usage policy	Other

Most influential factor: .....

2nd most influential factor: .....

3rd most influential factor: .....

4th most influential factor .....

Were there any factors that you did not consider/were not important to you when making your choice? If so, list these below:

.....

.....

.....

.....

You and your internet services

Section B

The following questions relate to accessing the internet through a 3G or 4G mobile connection.

1. Who is your mobile network provider?
   .....
2. How long have you been with this provider? .....
3. Are there particular times of day that you would say you use the internet on your smartphone/ tablet more than others? When?
   .....
4. What activities would you say you do most frequently on the internet through your 3G or 4G connection? (please rank the activity you do the most with a 1, and then simply tick the others than you do commonly).

Browsing the internet	Sending emails	Download music	Download movies
Instant messaging	Social networking	Peer to Peer file sharing (e.g. Limewire, uTorrent)	Uploading photos
Calling others (e.g. Skype)	Watch/ stream videos (e.g. YouTube, BBC iplayer)	Listen to/stream radio programmes	Online shopping

Selecting your mobile provider

Section B

For this task we would like you to think about the different factors you considered when selecting your mobile internet provider and rank them in terms of importance when making your choice. We have provided a number of examples of things that may have influenced you, but this is not a full list – if your decision was influenced by something not in the examples do tell us!

Cost	Personal recommendation
Brand Image	Network provider
Reliability of connection/ reception	User/ Professional reviews
Speed of connection	Household already connected
Part of bundle	Advertising
Special offers	Word of mouth
Availability in area	Download limits
Contract length	Text allowance
Call allowance	Other

Most influential factor: .....

2nd most influential factor: .....

3rd most influential factor: .....

4th most influential factor .....

Were there any factors that you did not consider/were not important to you when making your choice? If so, list these below:

.....

.....

.....

.....

Internet log

Section C

For this task we would like you to note down, over the course of a few days, any problems you notice with your broadband service either on your in-home internet on while using your 3G or 4G connection. Problems may include slow loading of certain sites, time outs when trying to access certain sites, buffering video clips etc.

Use the table below to record when these instances happen telling us the time, the online activity you were doing and the type of problem experienced. We have provided an example to guide you.

Time of problem	In-home internet or mobile internet?	Online activity	Type of problem
5.30pm	*In-home internet*	*Watching BBC iplayer through my TV*	*Kept buffering at the start of the programme*

Carrying out a speed test

Section D

For the final task we would like you to carry out a speed test to tell us how fast your internet connection is. This can be done in a few easy steps outlined below.

1. Go to www.bbc.co.uk/iplayer/diagnostics
2. Click 'start test'
3. Record the following information

Download speed:	
Streaming speed 1:	
Streaming speed 2:	

DONT FORGET TO BRING THIS COMPLETED DOCUMENT ALONG TO YOUR WORKSHOP!!

SEE YOU THERE.

7.3 Workshop traffic management stimulus

Traffic management

Stimulus

Accessing the internet

In the UK there are various different ways in which people can access the internet…

Broadband in the home

Many people, when at home, access the internet through a router or a hub by cable or wifi connection.

This is called **FIXED BROADBAND** because the internet is coming through a fixed location at home.

Internet on the go

When you access the internet on the go (e.g. outside) on your mobile device (e.g. smartphone/ tablet /dongle) this is through a data connection.

When you connect to the internet in this way this is called **MOBILE INTERNET**

Internet service providers

Whether you are using fixed broadband or mobile internet, your internet is provided by an **internet service provider** or ISP for short

Fixed broadband providers:

sky BT TalkTalk TESCO broadband & homephone O2 Virgin media plusnet

Mobile internet providers:

vodafone TESCO mobile orange Virgin media O2 3 T-Mobile EE

All clear so far?

Lets take a step back…

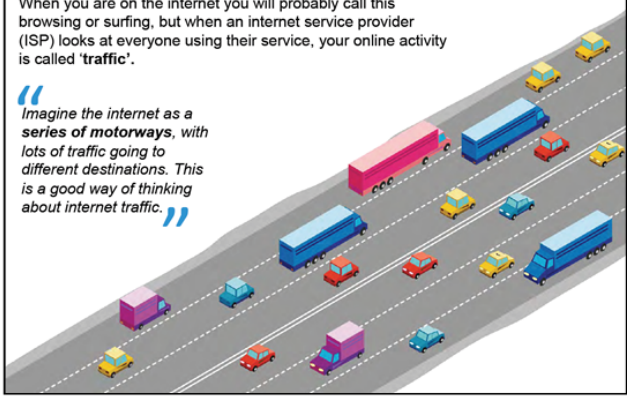
The internet is a big, busy place and is getting bigger and busier! 3 out of every 4 people in the UK have access to broadband.

That is around **46 million people**!

The internet as a 'motorway'

When you are on the internet you will probably call this browsing or surfing, but when an internet service provider (ISP) looks at everyone using their service, your online activity is called '**traffic**'.

*"Imagine the internet as a **series of motorways**, with lots of traffic going to different destinations. This is a good way of thinking about internet traffic."*



Types of 'traffic' on the motorway

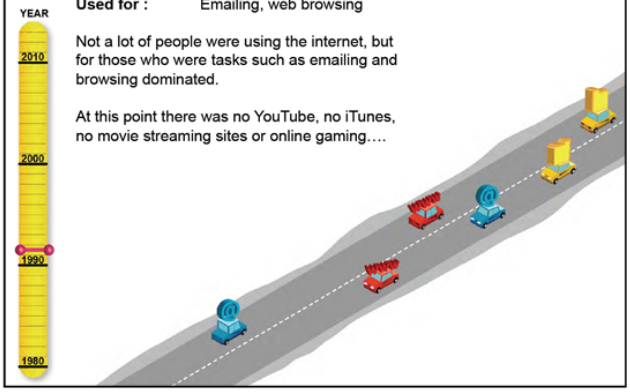
When you are online you are likely to do different activities – these activities are known as different types of internet traffic…

Back when the internet began…

Connection : Dial-up phone line
Used for : Emailing, web browsing

Not a lot of people were using the internet, but for those who were tasks such as emailing and browsing dominated.

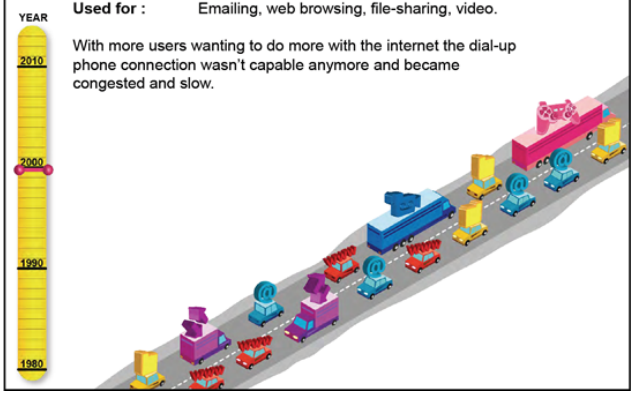
At this point there was no YouTube, no iTunes, no movie streaming sites or online gaming….



The internet became more popular…

Connection : Dial-up phone line
Used for : Emailing, web browsing, file-sharing, video.

With more users wanting to do more with the internet the dial-up phone connection wasn't capable anymore and became congested and slow.

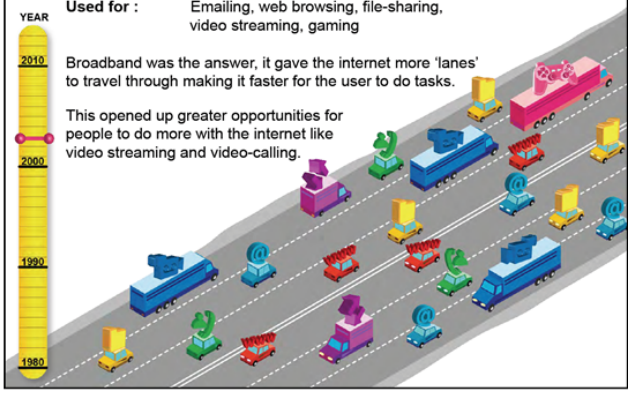


Welcome Broadband

Connection : Broadband
Used for : Emailing, web browsing, file-sharing, video streaming, gaming

Broadband was the answer, it gave the internet more 'lanes' to travel through making it faster for the user to do tasks.

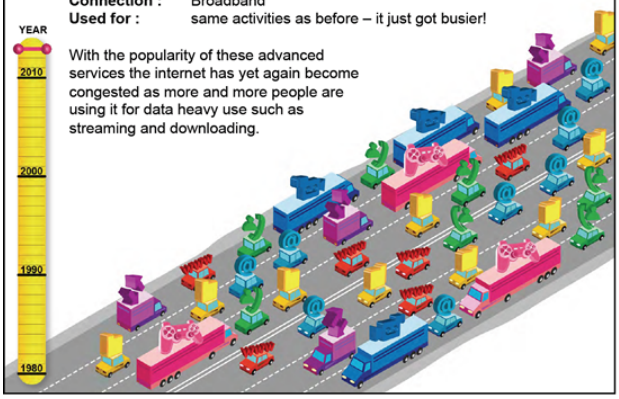
This opened up greater opportunities for people to do more with the internet like video streaming and video-calling.



…but then broadband got busy

Connection : Broadband
Used for : same activities as before – it just got busier!

With the popularity of these advanced services the internet has yet again become congested as more and more people are using it for data heavy use such as streaming and downloading.



So what happened next?

Enter traffic management…

In an attempt to deal with this congestion, Internet Service Providers (ISPs) had to come up with a solution that would keep the internet running without slowing everything down…

What does this mean in practice?

Certain activities such as watching/ streaming videos or online gaming use up much more bandwidth than other activities such as browsing or checking emails.

And, it can be important that certain types of traffic are not slowed down as this would affect the quality of the experience.

ISPs therefore reconfigured their motorways by introducing '**priority lanes' for certain types of internet traffic.**

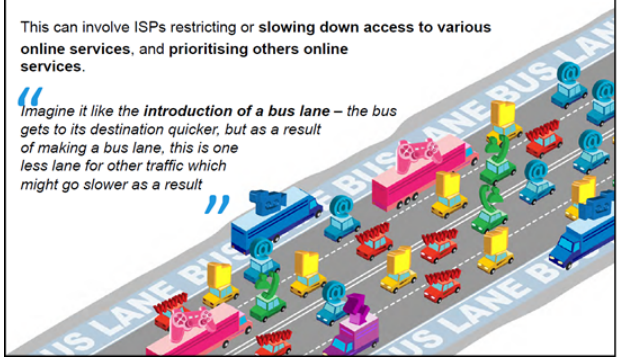
These internet traffic management measures generally only arise when the internet is busiest and there is congestion – the **peak time** is 5pm to midnight.

So, how does internet traffic management work?

The key aim of traffic management is to keep the internet moving so that customers can still access online services, even at peak times.

This can involve ISPs restricting or **slowing down access to various online services**, and **prioritising others online services**.

*"Imagine it like the **introduction of a bus lane** – the bus gets to its destination quicker, but as a result of making a bus lane, this is one less lane for other traffic which might go slower as a result"*



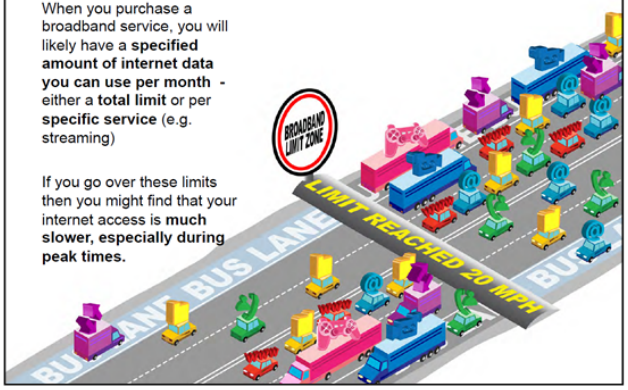
What does this mean in practice?

- An individual ISP might decide to prioritise audio and video services during peak times by putting them in the 'bus lane'
- This means you should be able to stream this content without disruption (e.g. Less likely to buffer)
- However, to protect this service they might slow down another type of traffic (e.g. File sharing) as a result
- But, just because a service is given priority doesn't guarantee it will be perfect. There are other issues outside of the ISPs control (e.g. speed of your computer)

You may also be 'traffic managed' if you exceed your data allowance

When you purchase a broadband service, you will likely have a **specified amount of internet data you can use per month** - either a **total limit** or per **specific service** (e.g. streaming)

If you go over these limits then you might find that your internet access is **much slower, especially during peak times.**



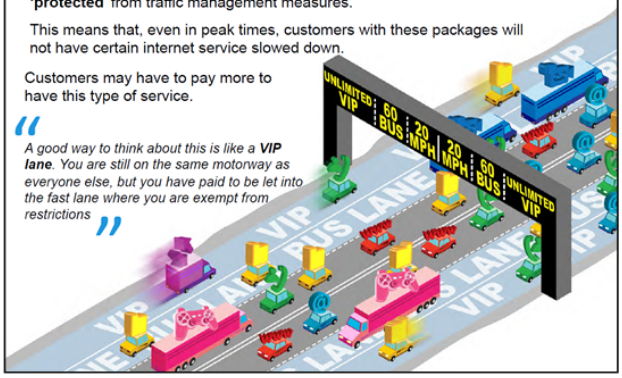
Managed services = no traffic management

Some ISPs now offer different broadband packages whereby services are '**protected**' from traffic management measures.

This means that, even in peak times, customers with these packages will not have certain internet service slowed down.

Customers may have to pay more to have this type of service.

*"A good way to think about this is like a **VIP lane**. You are still on the same motorway as everyone else, but you have paid to be let into the fast lane where you are exempt from restrictions"*



Key things to remember

- Traffic management measures can affect **both fixed and mobile broadband**
- It can **improve the user experience** as it manages congestion and helps to ensure everyone gets fair usage
- **Different internet service providers can have different policies on traffic management**. For example:
  - ISP 1 might only slow down services during peak times or after a usage limit is reached
  - ISP 2 might only ever slow down a single type of traffic (e.g. video streaming)
  - ISP 3 might not purposely slow down any traffic at any time

So why are we telling you this?

There is a problem

- We need to find out what the best ways are for presenting this information to customers
- We need to find out how well the information provided is working for consumers, such as
  - Is your ISP's TM policy understood?
  - Is you ISP's TM policy easily accessible (how easily can you locate it on your ISP's website?)

...and that is where you come in!

7.1 Quantitative research explanation of traffic management

The following explanation was used in the quantitative research to explain the concept of traffic management to respondent without the aid of the stimulus used in the workshops. This explanation was developed from feedback from the cognitive testing and the qualitative stage 1 research.

SCREENONE:
READ OUT
►There are many different activities which you can use the internet for such as streaming, browsing emailing etc; the internet providers call these activities 'traffic' on the internet. Some activities such as watching films or videos online or peer to peer file sharing create a lot of traffic other activities such as emailing and browsing don't.

►Nowadays, more people are using the internet and are using it for watching or listening to content and sharing files which create more internet traffic. This means at peak times when the internet is busy all the activities or 'traffic' can slow down potentially causing problems for the user such as buffering or slower connection to sites

SCREENTWO:
READOUT
►In order to reduce the potential problems some internet providers put in place measures to control different types of activities to create a better user experience. For example an internet provider may choose to give priority to video or audio streaming and game playing in order to improve quality (reduce buffering), but as a result this could potentially slow down other activities such as emailing or browsing. Some may not control the priority of activities at all.

►This control of internet activities is what is referred to as **['Internet Traffic management']**