

# 4GEE MOBILE LIVING INDEX

**First half 2013 report**

16 August 2013



# INTRODUCTION



Hello, and welcome to the first edition of the 4GEE Mobile Living Index. Using the latest research and detailed network statistics, this report provides a snapshot of modern life. It shows how the people and businesses

of Britain are using superfast connectivity to do more, trade more and connect more.

EE pioneered 4G in the UK, and we are now seeing average speeds of more than 16mbps and peak speeds of 100mbps on a regular basis.

We've built a superfast network that's equipped to handle the demands of a tech-hungry nation, and this report shows the impact this has had on behaviours and social trends. It also gives us some early insights into how people are viewing themselves, their devices and connectivity, as the physical and virtual worlds move closer together.

We live in exciting times, but we are just at the start of the digital revolution. In fact, I believe we are on the cusp of a golden age of mobile where the applications, products and services that we haven't yet imagined draw on the power of the superfast opportunity to drive a new wave of personal and business growth.

I hope you enjoy the insights in this report. We'll be producing another in early 2014, when I expect we'll see how 4G has continued to have a dramatic effect on the way consumers and businesses run their mobile lives."

A stylized, handwritten signature in dark blue ink, consisting of a series of loops and a long horizontal stroke.

Olaf Swantee, CEO, EE

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## METHODOLOGY

The 4GEE Mobile Living Index was brought together using insight from the EE network team and an independent TNS survey of 1,000 4G users. Information within was gathered between 1 January 2013 and 31 July 2013. TNS conducted the survey of 4GEE customers in May, using telephone research.

### Key Findings

- > One in four ultra-social Britons check social media apps more than ten times a day on their 4G smartphone or tablet
- > Facebook, Twitter and Instagram are the UK's favourite 4G social media apps
- > People are sharing videos and pictures over 4G, leading to network upload traffic overtaking download traffic at key events
- > One in three stream more video over 4G than they did using 3G, with BBC iPlayer, Netflix and Sky Go the favourite TV services
- > 71% are shopping on their 4G smartphone or tablet, with men three times more likely than women to spend over £200 a month on their mobile

# PROFILE OF THE 4G USER

BY JAMES M. HARRIS, JR.

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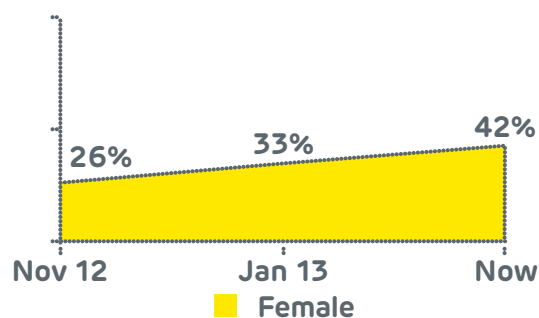
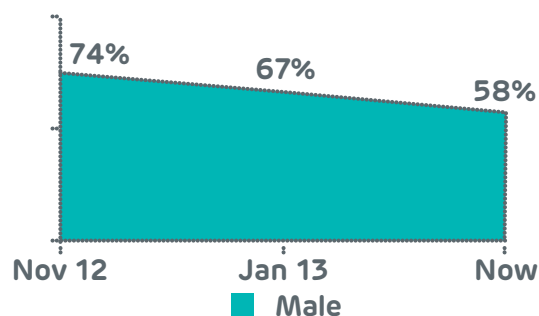
AND JAMES M. HARRIS, JR.

# WHO'S USING 4G?

Early adopters of 4G were male, but in recent months we have observed a more even split between male and female 4G users. Looking at customer ages there is a definite weighting towards 18-34 year olds, which has resulted in the average 4G user being around five years younger than our 3G customers. Because 4G is proving to offer consistency as well as fast speeds,

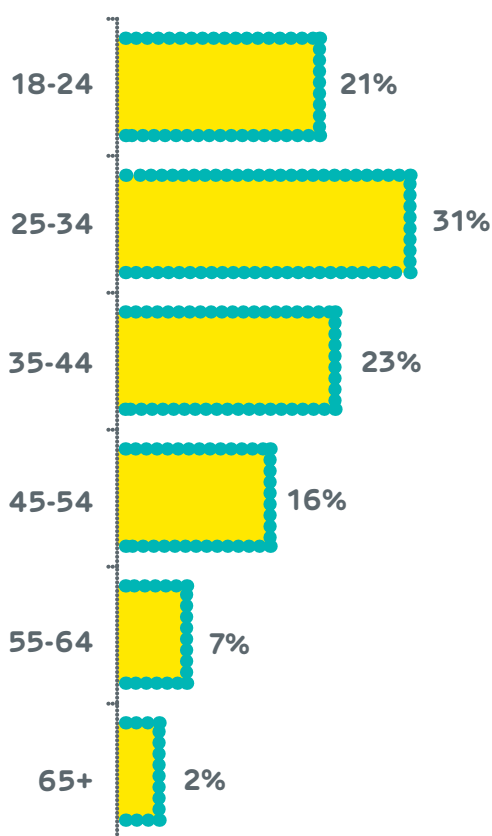
customers are increasingly using it to replace public Wi-Fi and home broadband. As the nationwide rollout of 4G has moved into less urban areas that have less public Wi-Fi, and relatively poor home broadband speeds, this trend has accelerated.

## Gender



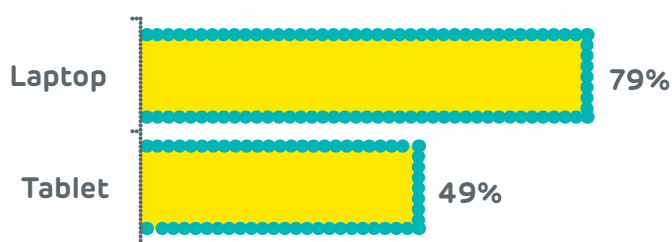
Source: EE

## Age

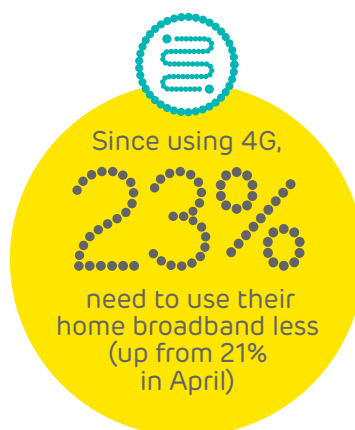
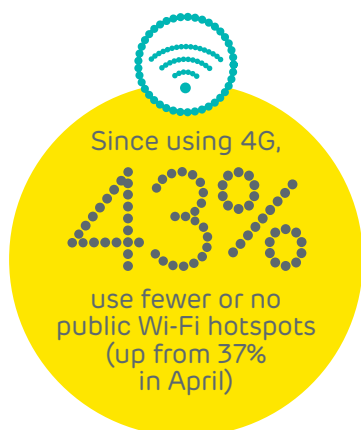


Source: EE

## Other personal devices owned



Source: TNS

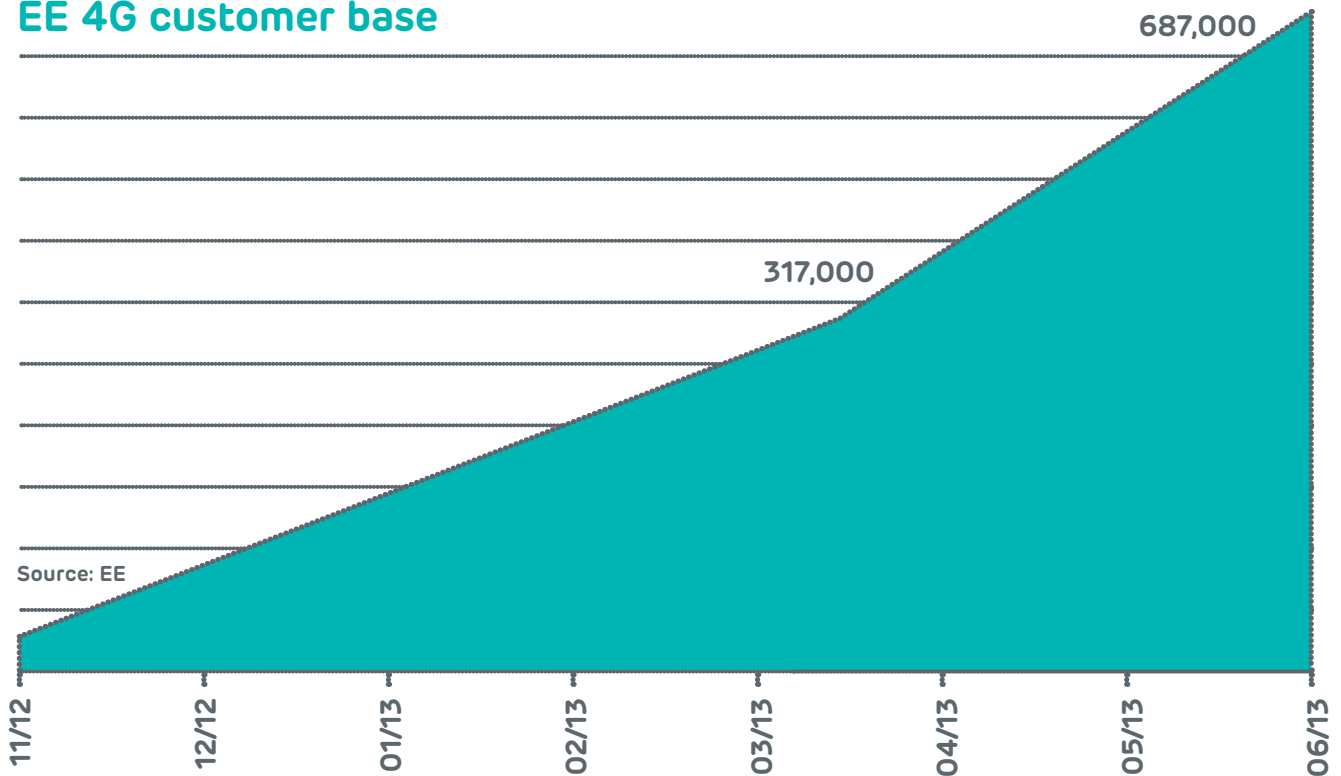


Source: TNS

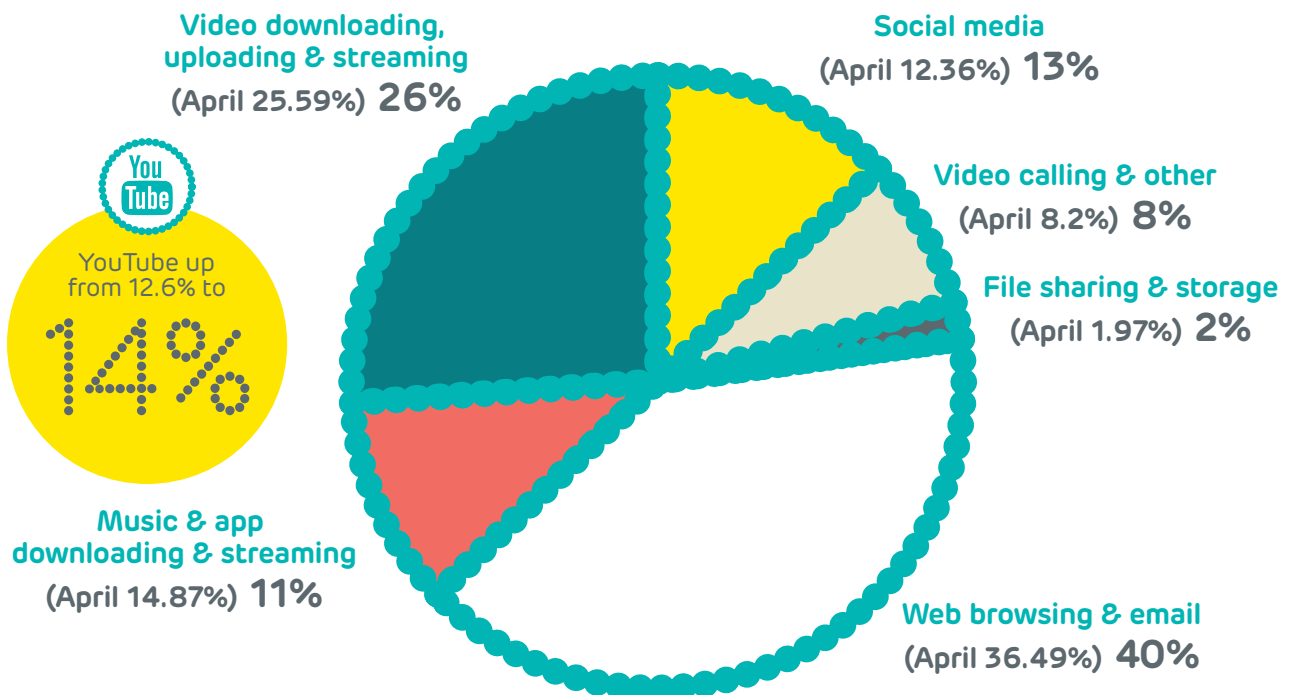
# BRITAIN IS EMBRACING 4G

The EE customer base is accelerating as our 4G rollout continues and more of the country learns about the advantages and benefits of 4G. In the lower graph we see that those customers are spending a lot of time downloading, uploading and streaming, with video forming a huge part of life on 4G. In fact YouTube alone accounts for 14% of 4G traffic, with users enjoying the service's 'adaptive' streaming that boosts the quality of the picture for 4G services.

## EE 4G customer base



## What are people doing with 4G?



Source: EE



# 4G USER BEHAVIOUR

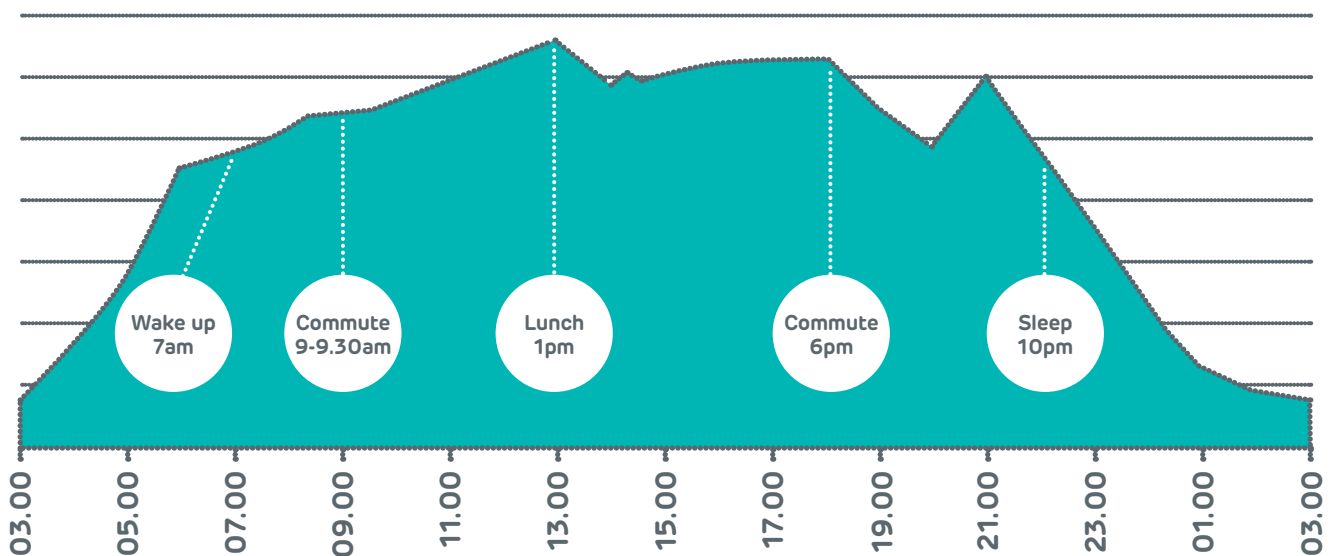
# 4G STREAMING IS CHANGING CONSUMER USAGE HABITS

In these graphs we can see how streaming, which has become more commonplace on 4G, is changing online habits. Just looking at web traffic alone, the pattern is as one would expect across a normal day's mobile activity. Users are active on their phones throughout the waking day, with notable peaks during commutes and at lunchtime. However, looking at streaming alone the pattern is very different.

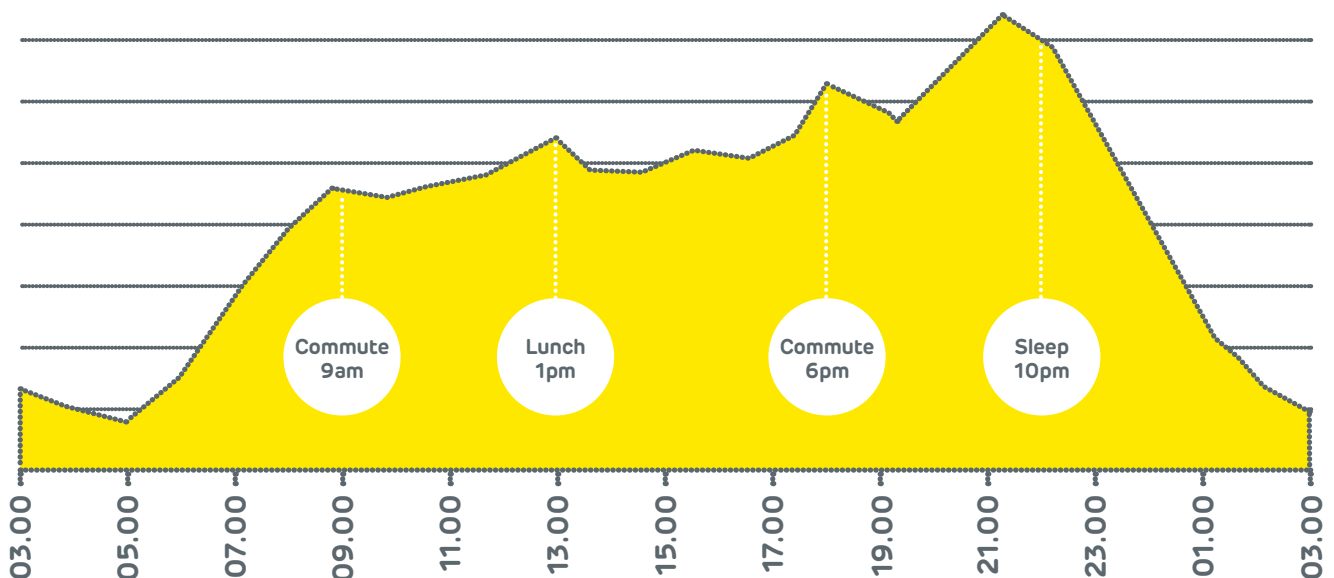
Streaming is a predominantly evening activity with some prominent peaks during commutes and lunchbreaks; it also starts slightly later in the day and takes places longer into the night.

On both charts there is a noticeable dip around 8pm when, in traditional British fashion, people enjoy their dinners, watch prime-time television, or do both together.

## Web



## Streaming



Source: EE

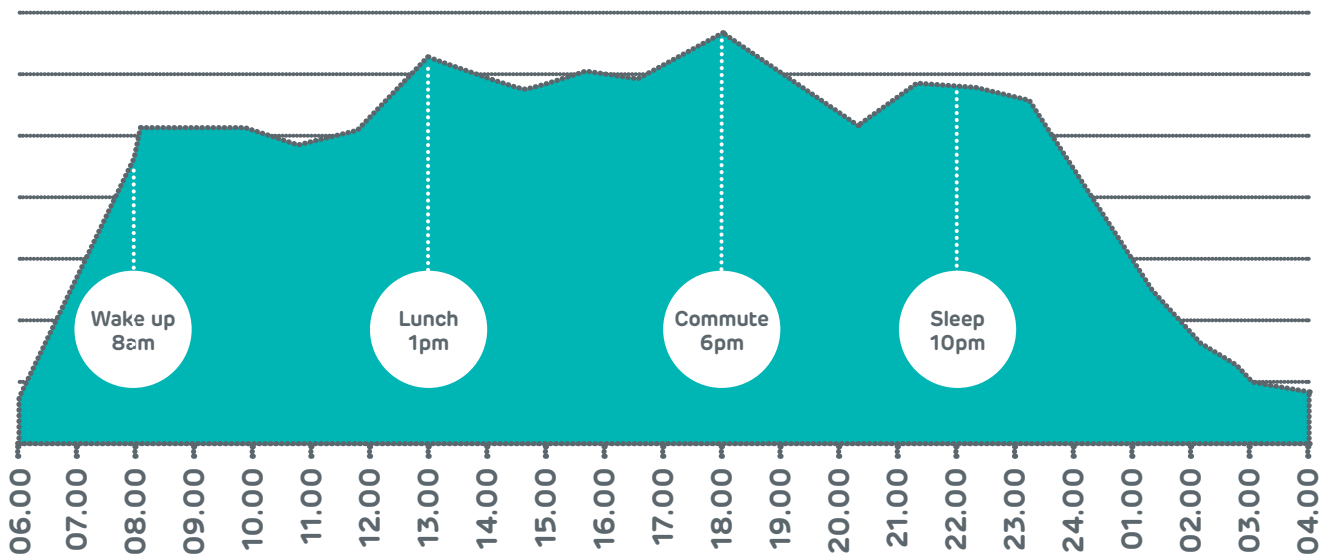
# STREAMING: A TABLET ACTIVITY

Looking at 4G-capable tablets and smartphones, there is a marked difference in how the devices are being used. Broadly, smartphones match general web browsing usage patterns (see previous page) and tablets reflect streaming.

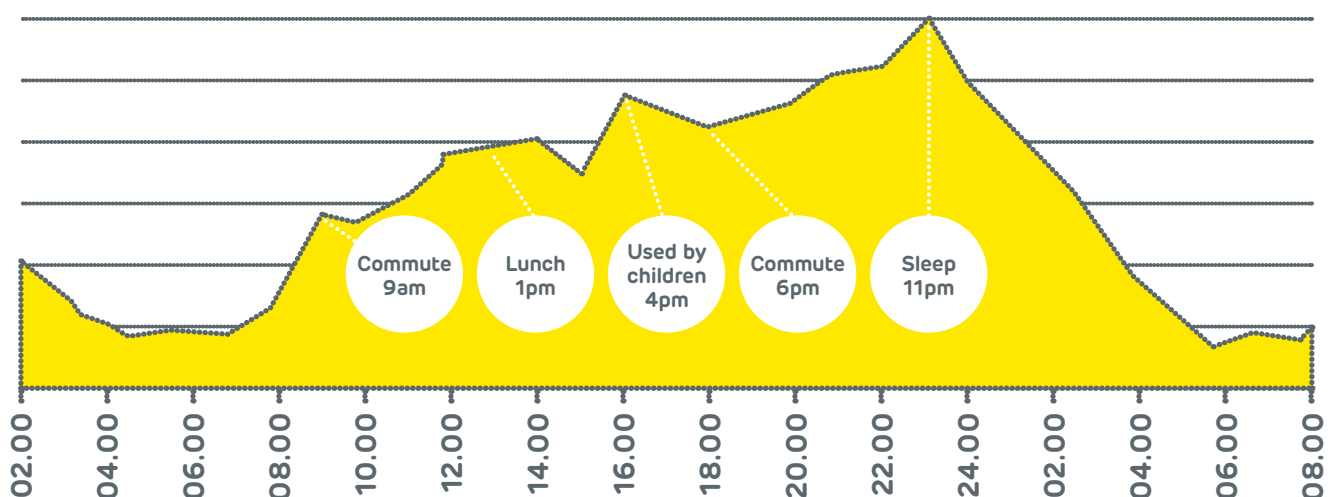
Here the top graph shows an iPhone 5. It demonstrates how the smartphone on a 4G network is an integral part of daily life, with activity beginning relatively early in the morning and only tailing-off just before midnight. With 4G, the idea of the 'always online' generation becomes a reality.

The bottom graph displays iPad usage. It peaks markedly in the evening, highlighting that not only do 4G users like to stream on their tablet devices, but that the tablet is less a feature of the normal working day for most people than the smartphone. There is a small peak around 4pm on the iPad graph that likely indicates children use it either upon return from school or when travelling home.

## 4GEE iPhone 5 data traffic



## 4GEE iPad data traffic



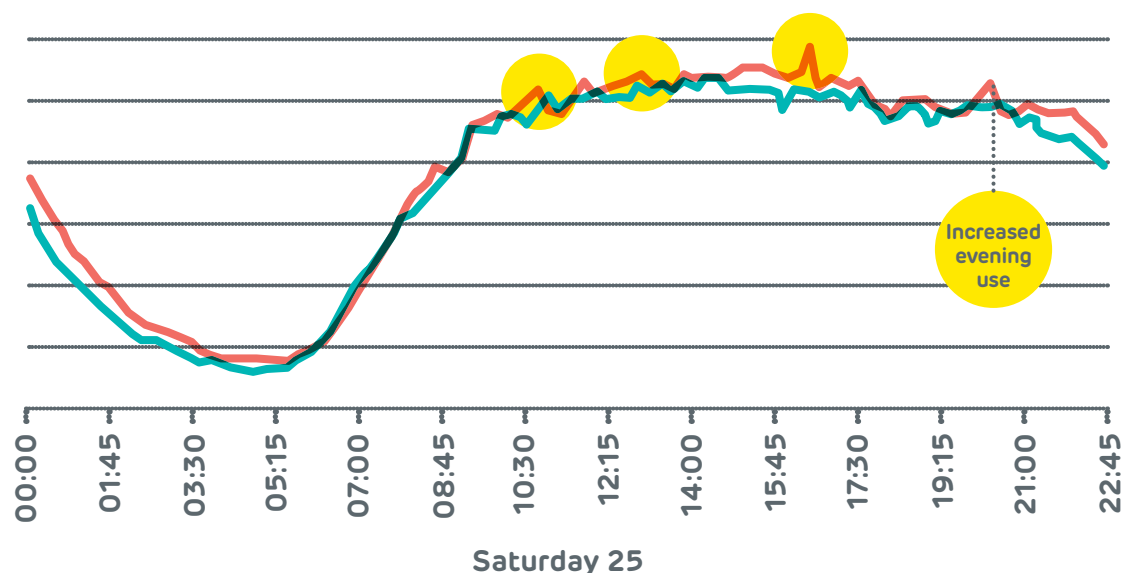
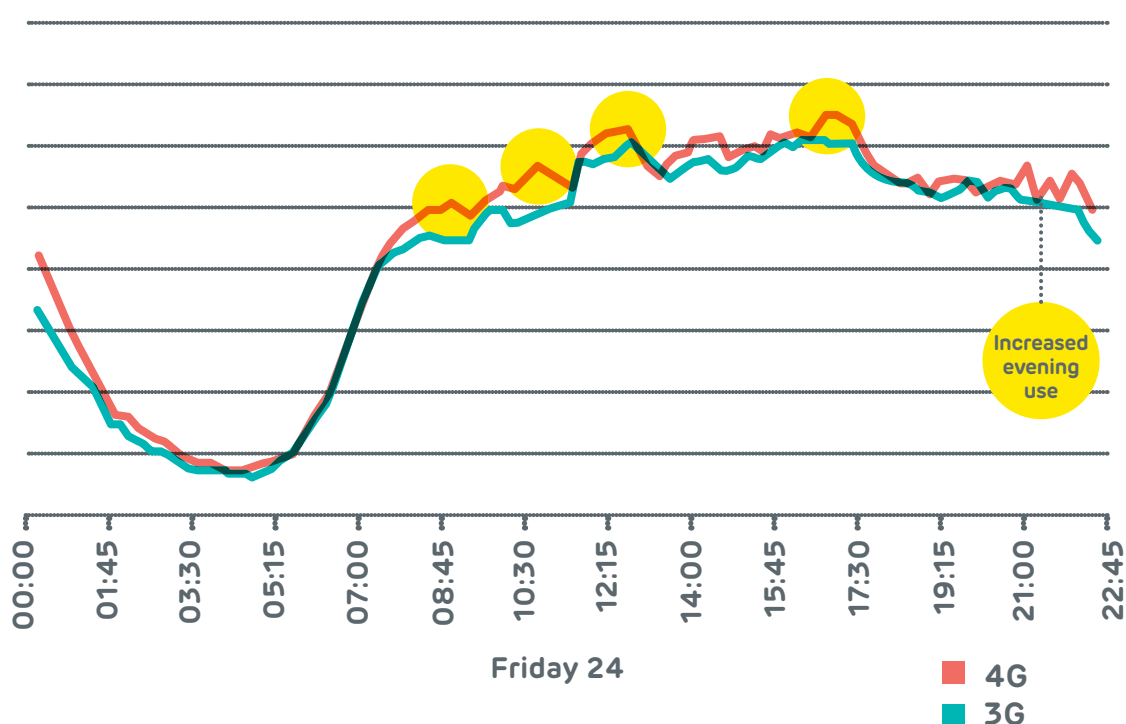
Source: EE



# TWO TYPICAL DAYS: FRIDAY 24 AND SATURDAY 25 MAY

The pattern of 4G is generally more variable than 3G. We also see bigger relative peaks on the commute home and in the evening, largely because of streaming activity. The higher peaks in the red 4G lines on both graphs highlight that 4G is being used at peak times for data-intensive activity, such as streaming, social media activity and apps that makes the most of 4G speeds.

## Average 4G and 3G data volumes per user

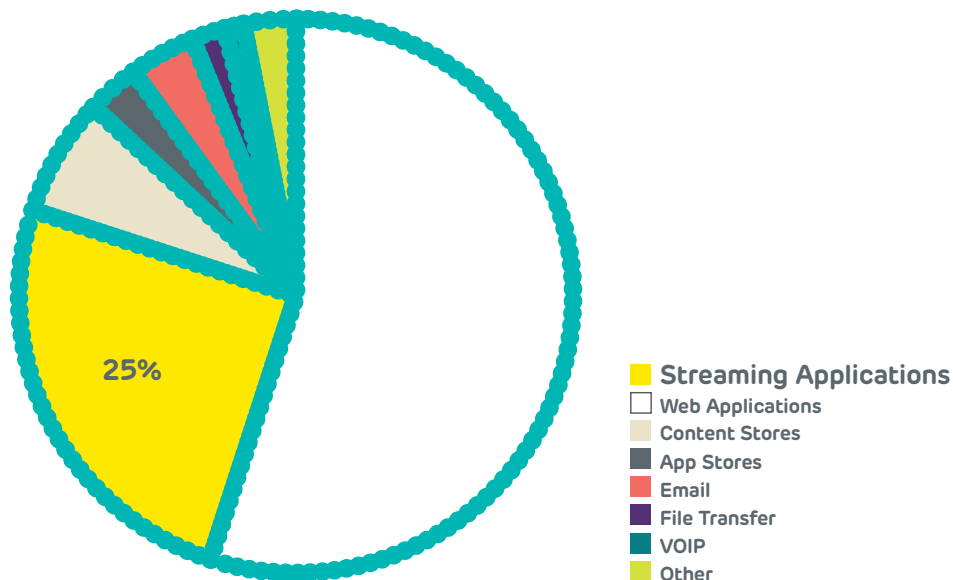


Source: EE

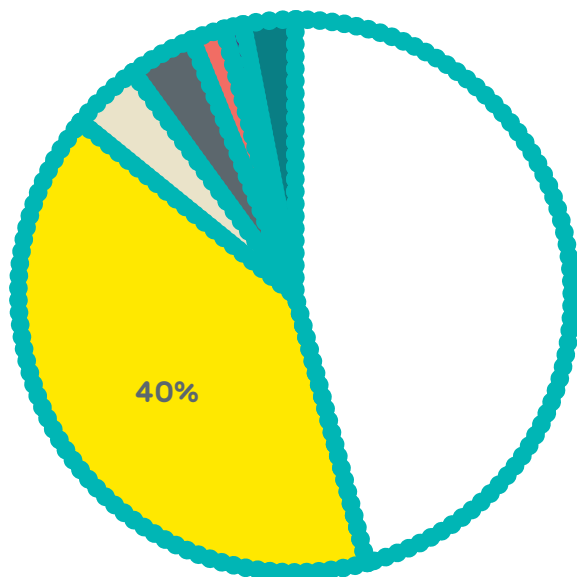
# MORE STREAMING ON BIGGER SCREENS

Though in general we see increased streaming when customers move to a 4G network, there is a variation on how much they stream based on the size of the screen they are using. On page four we show that 49% of 4G users also own a tablet device. The research suggests that people switch from smartphones to tablets when looking to stream video.

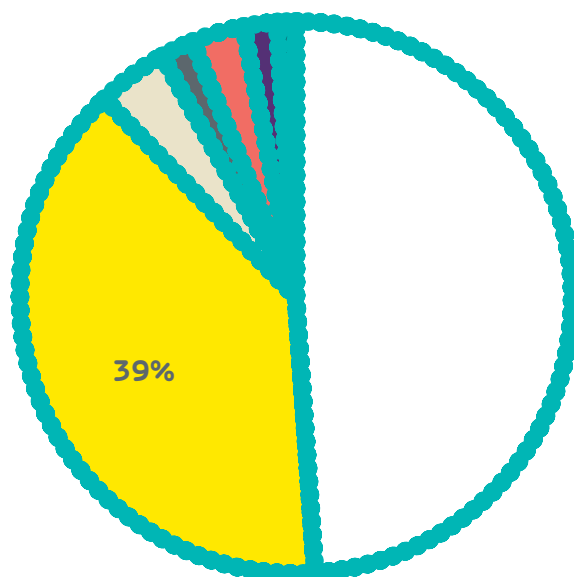
**iPhone 5**  
**25% streaming**  
(4 inch screen)



**Samsung Galaxy Note 2**  
**40% streaming**  
(5.5 inch screen)



**iPad**  
**39% streaming**  
(9.7 inch screen)



Source: EE

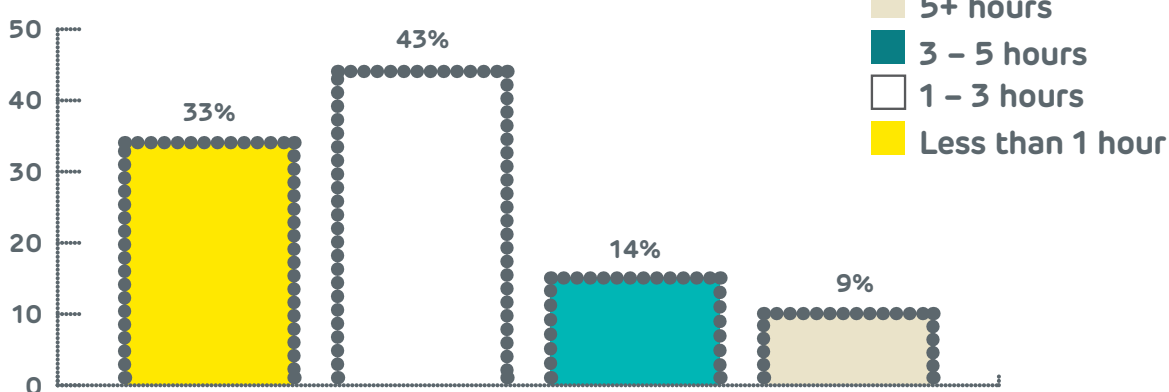
# MAPPING THE DIGITAL LIFE

# PORTRAIT OF A MOBILE LIFE

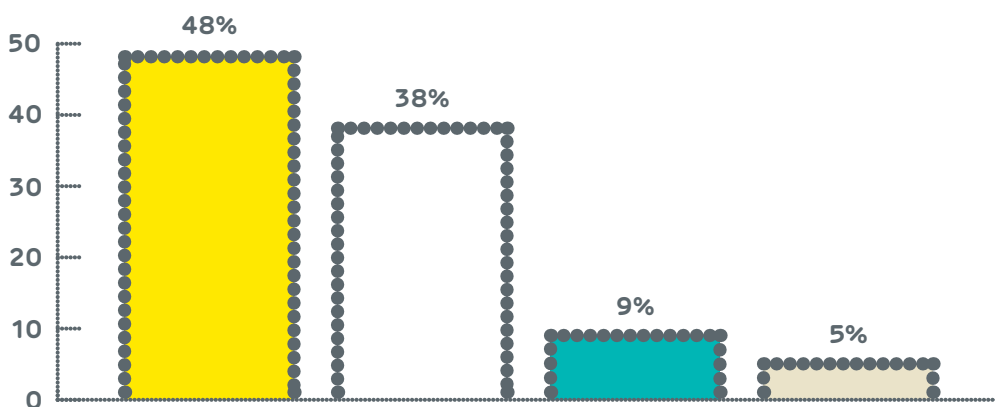
Here we look at the ways in which customers are accessing the mobile internet, and for how long. What has been known for a long time is that consumers spend an increasing amount of time online and the 'always online' generation certainly reflects that in this report. Looking at access via mobiles and tablets, some clear patterns emerge. Firstly, a large proportion of mobile users spend more than three hours a day online; over the mobile

network it is 23% and then over Wi-Fi or home broadband it is 27%. The former figure is expected to rise as the 4G user matures and the latter is expected to stay around the same – as shown in a previous graph, when users switch to 4G they are increasingly using it as a replacement for home broadband and Wi-Fi. Tablet use on the mobile network is not as prevalent, but as the tablet explosion continues that is also expected to rise.

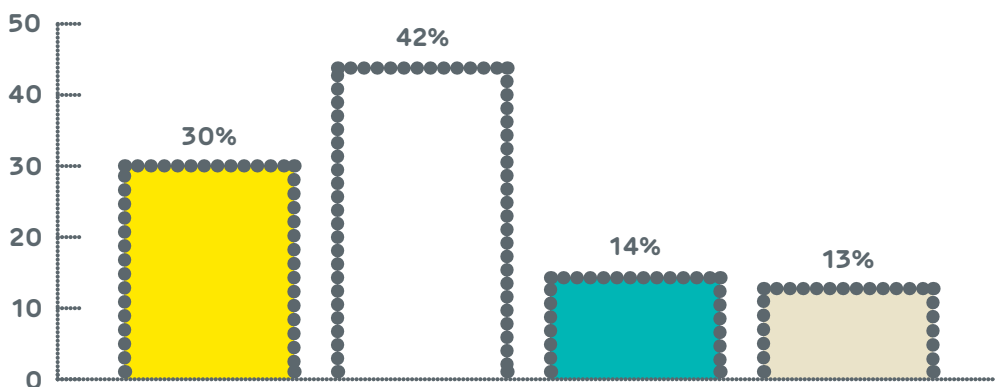
## Mobile over mobile network



## Tablet over mobile network



## Mobile over Wi-Fi/ home broadband

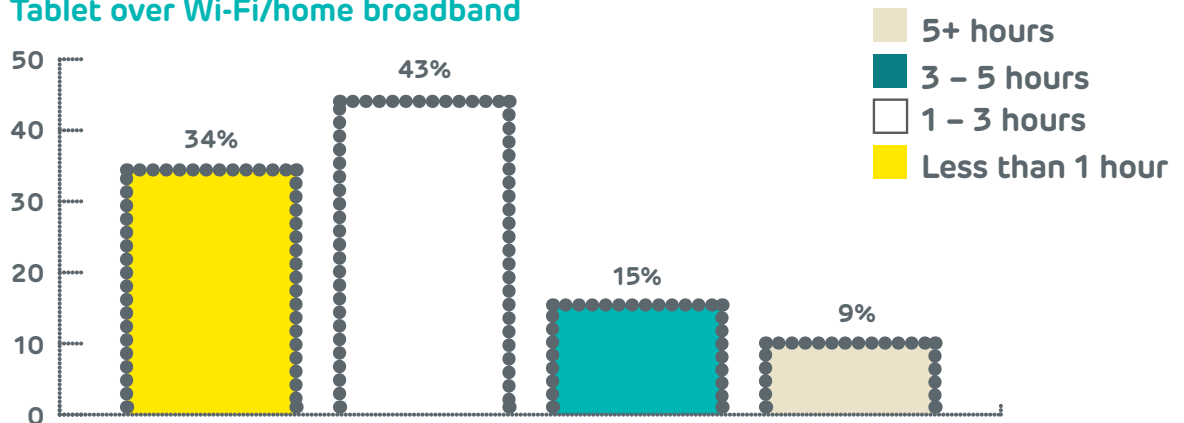


Source: TNS

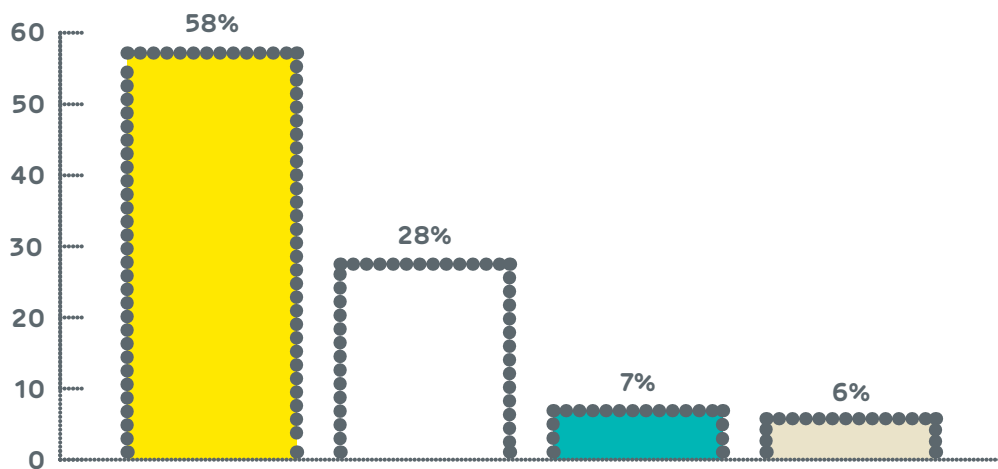
# PORTRAIT OF A DIGITAL LIFE

The predominant form of non-work internet access is still the laptop or desktop over Wi-Fi or home broadband, with more than a third of people spending more than three hours online in this way. Tablets and laptops using a mobile network are already a significant proportion of online activity, although they still have some way to go to reach the heights of home browsing.

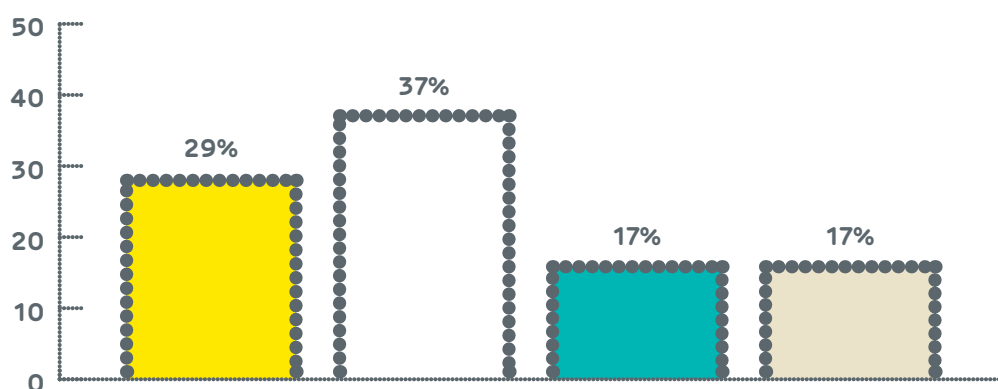
## Tablet over Wi-Fi/home broadband



## Laptop over mobile network (using dongle)



## Desktop/laptop over Wi-Fi/home broadband



Source: TNS

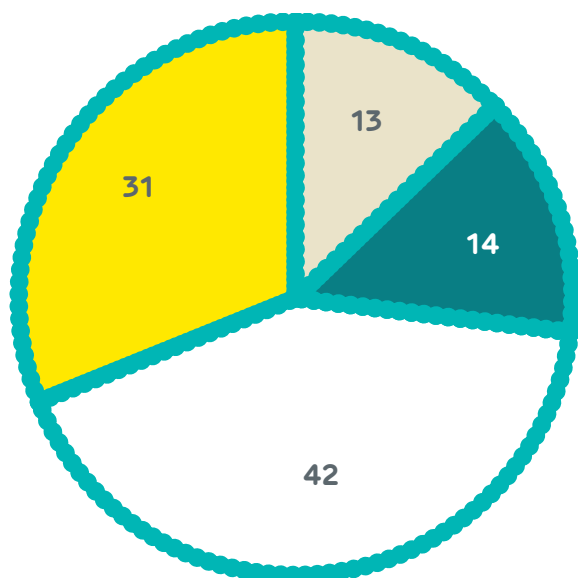


# A QUARTER OF 4G USERS SPEND THREE OR MORE HOURS ON THE MOBILE INTERNET EVERY DAY

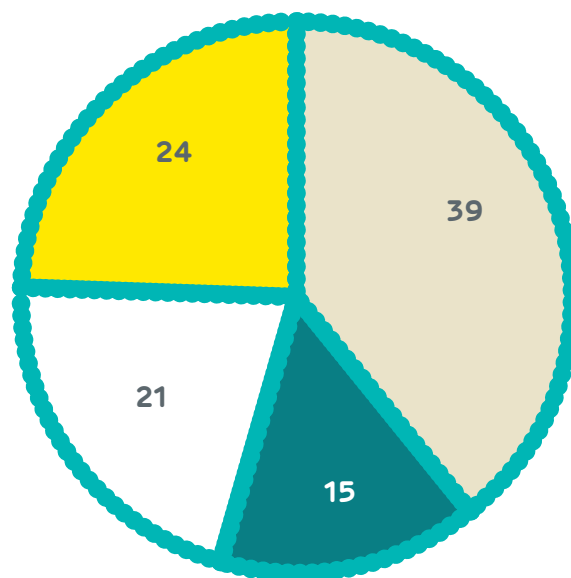
Here we look at general usage to get a complete overview of what the average 4G customer's digital life looks like. One in three customers currently spend five or more hours a day using home and work broadband, but mobile internet is catching-up. Already 26% of 4G users spend three or more hours a day online using either tablets, smartphones, or mobile Wi-Fi units.

## Time spent accessing the internet

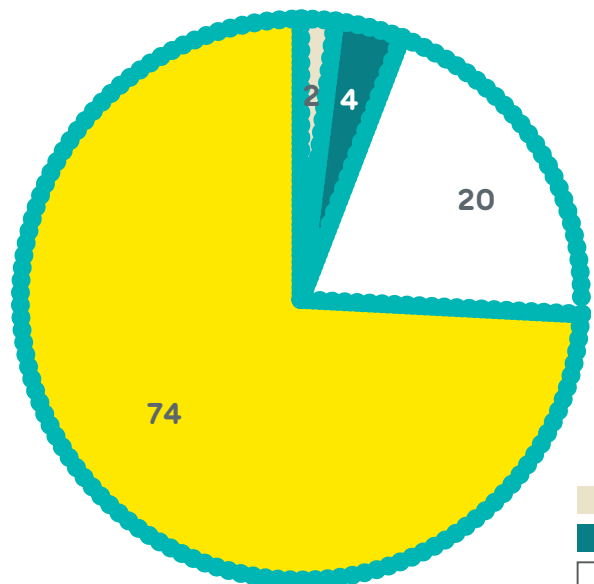
4G network



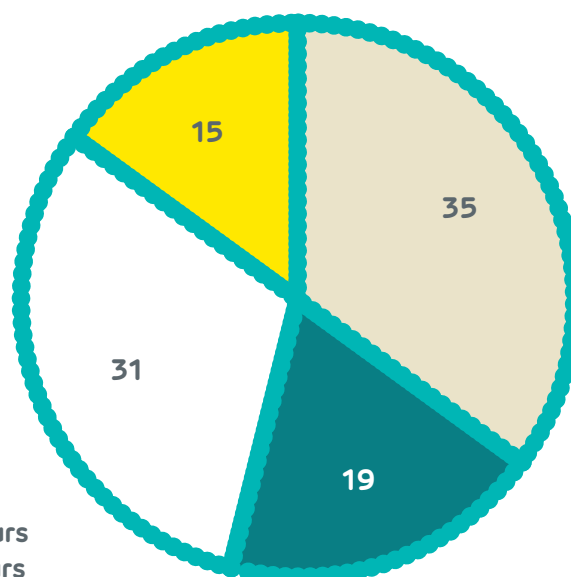
Work broadband (ADSL or fibre)



Public Wi-Fi



Home broadband (ADSL or fibre)



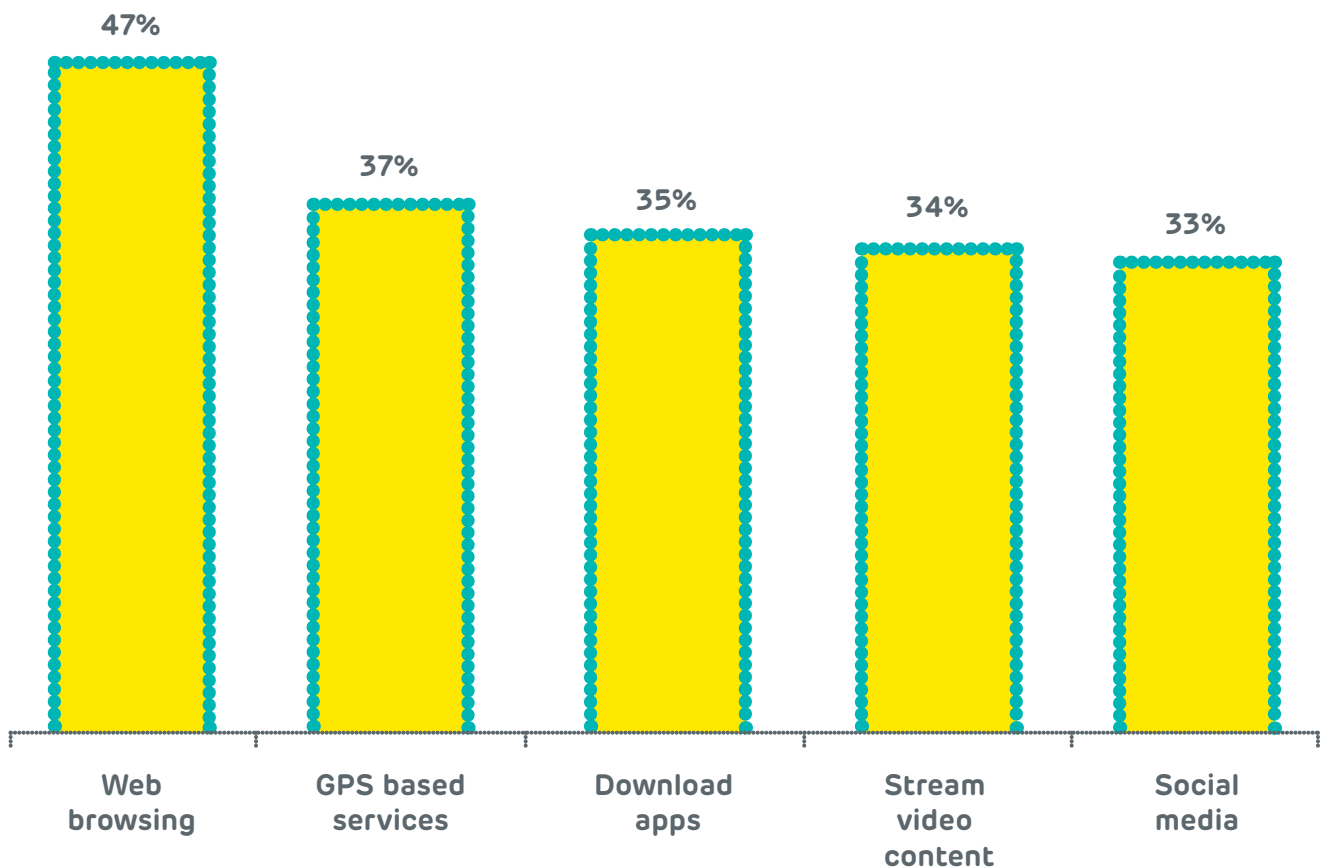
Source: TNS

# 4G IS CHANGING WHAT PEOPLE DO ON THE MOVE

The rise in the use of map services, social media, app downloading and video streaming is clearly shown in this chart, which tracks the uplift in certain activities when customers switch to 4G. Customers are already enjoying making use of the speed, consistency and

widespread availability of the 4GEE network. As app developers and content developers adapt their services to make the most out of these 4G benefits, we expect this trend to accelerate.

## What do you do more of on your mobile device since you started using 4G?



Source: TNS

# FACEBOOK FOR FEMALES, TWITTER FOR MALES

Facebook is the UK's favourite social media site among 4GEE users. There are some interesting variances demographically in Facebook and Twitter; the former is more popular with women, the latter among men.

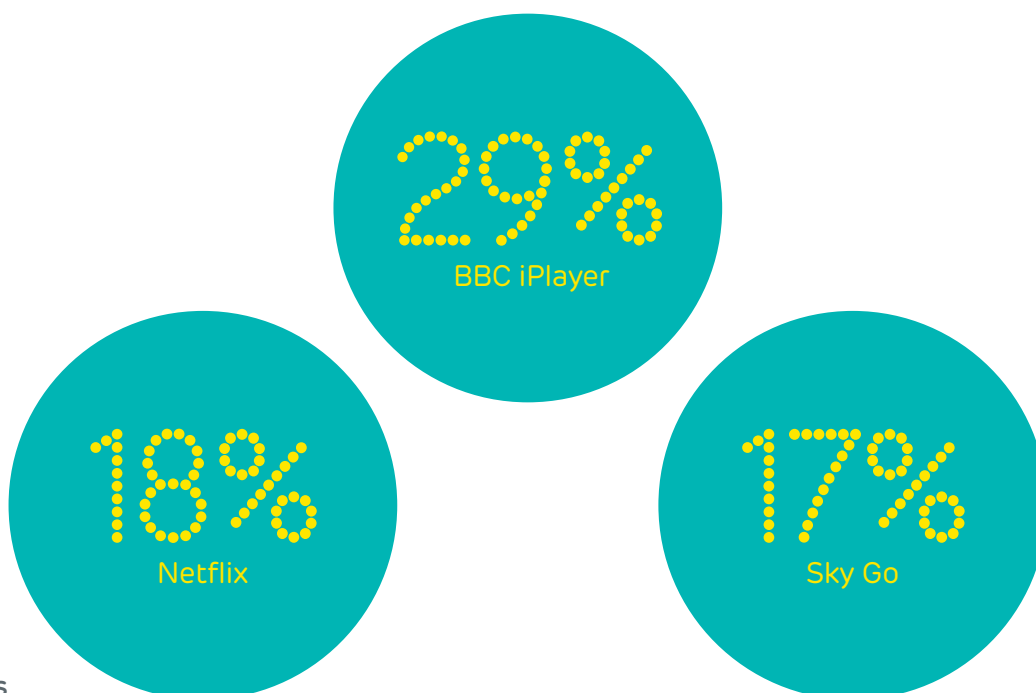
Additionally, people on Nokia devices (22%) are more likely to spend time on Twitter than people on Apple (14%) and Samsung (9%) devices. Given some Nokia devices come pre-loaded with Twitter, it gives credence to the effectiveness of these device and appmaker deals.

## What is your favourite social media site?

|   |   |           |
|---|---|-----------|
| 1 |    | Facebook  |
| 2 |    | Twitter   |
| 3 |   | Instagram |
| 4 |  | WhatsApp  |
| 5 |  | Linkedin  |

Facebook is more popular with females whereas more males said they liked Twitter.

## What's your favourite TV service?

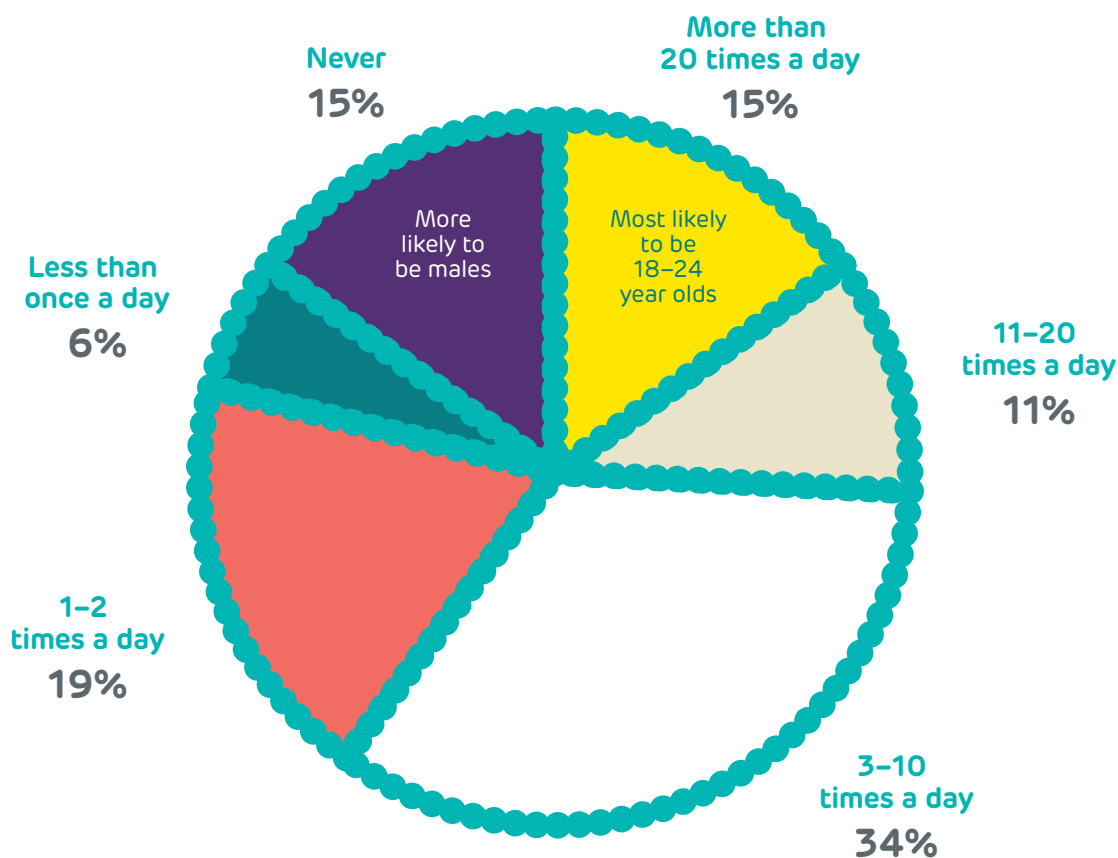


Source: TNS

# YOUNGER CONSUMERS CHECK SOCIAL MEDIA SITES MOST FREQUENTLY

Looking holistically at social media access, the picture is of a generation of users who are constantly making contact with each other online and on the go. 26% of users check social media sites on the 4G network more than ten times a day. Unsurprisingly, the younger the user the more likely they are to check social media sites frequently. Men are more likely than women to not engage in social media at all.

## How often do you check social media sites during a typical day on your 4G device?



26%

of 4G users check social media more than ten times a day

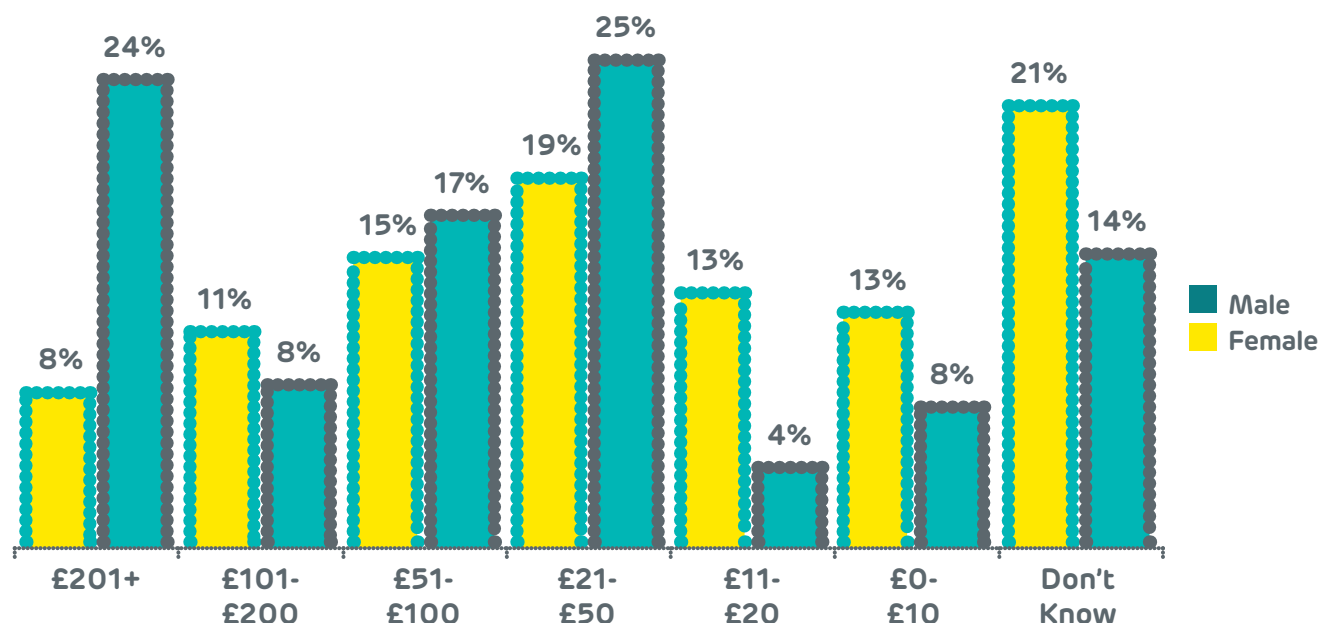
Source: TNS

# MEN SPEND MORE MONEY SHOPPING ONLINE

4GEE users trust the connectivity speeds, security, and reliability of the service, so we are seeing a lot of activity in the online shopping arena. Consumers are not just spending money in app stores, but buying expensive items that have traditionally been purchased either in-store, or from a desktop computer.

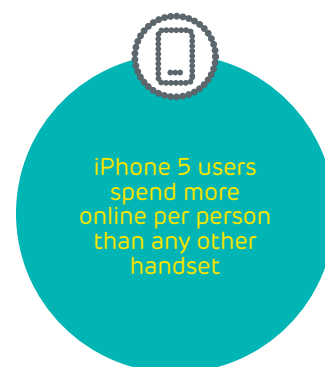
Remarkably, a quarter of men say they spend more than £200 a month over 4G, reaching that figure buying electrical goods, travel and fashion items. For both men and women fashion was the most common online purchase, with retailers like Asos, eBay and John Lewis benefiting from sites optimised for mobile browsing.

## Amount spent over the past month shopping online using 4G



## Top 10 most popular purchases

|    |                   |
|----|-------------------|
| 1  | Fashion           |
| 2  | Apps              |
| 3  | Entertainment     |
| 4  | Electronics       |
| 5  | Books/Magazines   |
| 6  | Travel            |
| 7  | Gifts             |
| 8  | Automobile Access |
| 9  | Toys              |
| 10 | Grocery           |



Source: TNS



# SMALL SCREEN, BIG MOVIES

Here we look at the top ten films sold on EE Film over a three month period. EE Film allows customers to play the latest and best films on the go, choosing from a list of over 700 movies. We can see that a small screen does not particularly change buying habits when it comes to movies. 4G users are quite happy to stream in HD across the EE network and watch it on their mobile device or tablet, even when it is the latest blockbuster or special effect-laden film that one would usually expect to view on the biggest screen they

can. The films purchased largely match the most popular rental films of the period for TV-based film rental services (excluding comedy-drama sequel *West is West*, which was offered on promotion during this period). 4GEE customers are also enjoying the benefit of superfast access to their favourite songs via Deezer. On average, a 4G customer downloads a 12-track album in 1 min 19 secs (6.6 secs per track). Over 3G the average is 3 min 43 secs.



## EE Film top purchases April – June

|    | April                    | May                    | June                   |
|----|--------------------------|------------------------|------------------------|
| 1  | The Hobbit               | Jack Reacher           | West is West*          |
| 2  | Silver Lining Playbook   | Life of Pi             | A Good Day to Die Hard |
| 3  | West is West*            | Django Unchained       | Wreck-It Ralph         |
| 4  | Argo                     | The Impossible         | Looper                 |
| 5  | Jack Reacher             | The Hobbit             | Django Unchained       |
| 6  | Skyfall                  | Pitch Perfect          | Flight                 |
| 7  | Pitch Perfect            | Flight                 | I Give it a Year       |
| 8  | Dark Knight Rises        | Les Miserables         | Zero Dark Thirty       |
| 9  | Twilight Breaking Dawn 2 | Silver Lining Playbook | Gangster Squad         |
| 10 | Seven Psychopaths        | Looper                 | Life of Pi             |

Source: EE

\* EE Film promotion



## Deezer 4GEE customers top 5 songs in July

|   | Track         | Artist       |
|---|---------------|--------------|
| 1 | Wake Me Up    | Avicii       |
| 2 | Blurred Lines | Robin Thicke |
| 3 | La La La      | Naughty Boy  |
| 4 | Love Me Again | John Newman  |
| 5 | Get Lucky     | Daft Punk    |

Source: Deezer

## Deezer 4GEE customers top 5 albums in July

|   | Track                     | Artist       |
|---|---------------------------|--------------|
| 1 | Magna Carta... Holy Grail | Jay-Z        |
| 2 | Wake Me Up                | Avicii       |
| 3 | Blurred Lines             | Robin Thicke |
| 4 | La La La                  | Naughty Boy  |
| 5 | Love Me Again             | John Newman  |

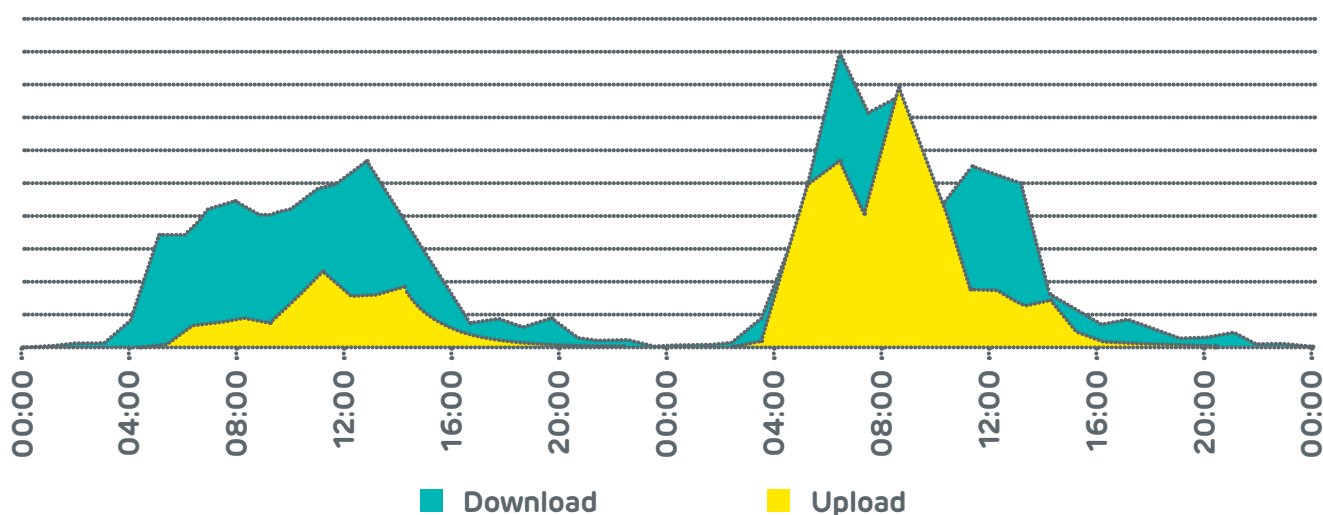
# EVOLVING BEHAVIOUR

# 4G SEES UPLOADING OVERTAKING DOWNLOADING FOR THE FIRST TIME

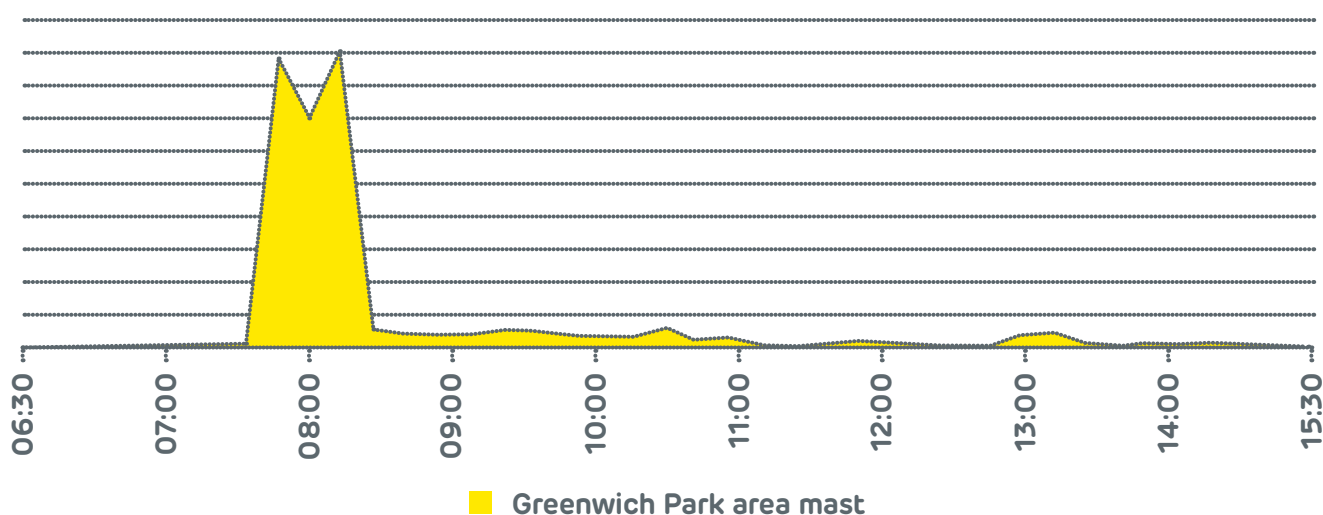
With 4G, sharing information becomes easier than on less consistent or slower networks. Here we look at two examples where the ability to share information has created incredible peaks in upload activity, of the sort that is not experienced on 3G networks. For example, on the day of Margaret Thatcher's funeral we saw uploading exceed downloading in the area of St Paul's Cathedral. This was likely those viewing the funeral procession taking pictures and video and uploading them to social media sites.

Likewise, in Greenwich Park before the London Marathon (the area where runners congregate before beginning the race) we saw an enormous peak in upload activity as competitors put images of themselves ready to leave on social media sites and shared them with the people sponsoring their efforts. As the race begins, that activity tails off immediately (not least because it is difficult to upload to Facebook while you're running a marathon).

## Total data volumes around London's St Paul's Cathedral on the five days around Margaret Thatcher's funeral



## Greenwich Park Area – upload traffic volume on day of the London Marathon



Source: EE

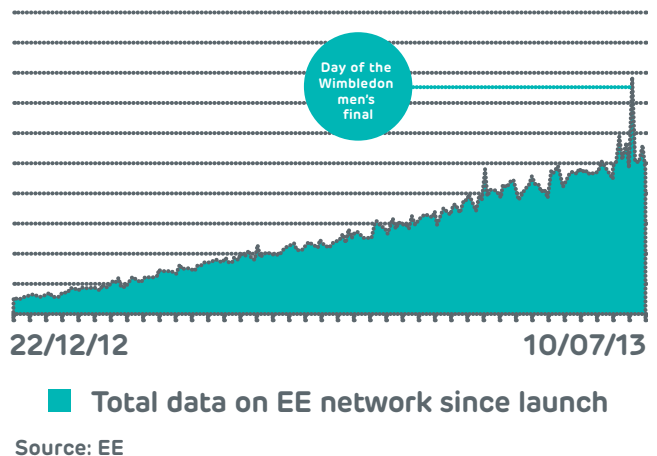
# STREAMING: A 4G REALITY

## WIMBLEDON MEN'S FINAL

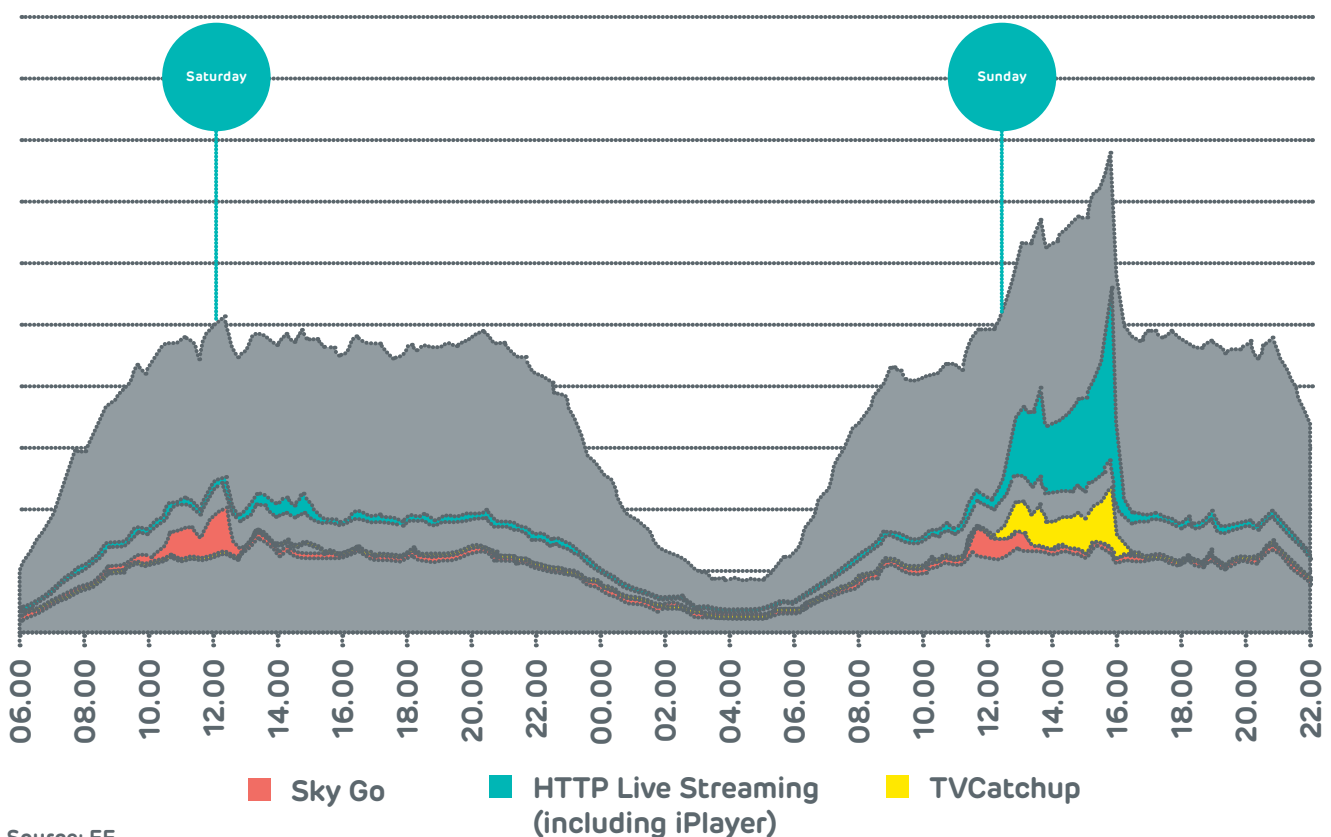
The Wimbledon final is a great example of how, on 4GEE, consumers are changing viewing habits and watching major events on the go or away from the living room. On a sunny day, such as the men's final on the Sunday, we saw a huge peak in traffic – 20% higher than any day before on the 4G network – as tennis fans watched Murray's victory from parks and gardens around the country.

On the second graph we can see the impact streaming has on network traffic. This chart shows the Wimbledon finals weekend. Saturday shows a noticeable peak in the morning around the time the British and Irish Lions were playing (Sky was the only broadcaster showing the Lions match and the Formula One German Grand Prix the following day) and this appeared as Sky Go activity on the EE network. The next day there was similar Sky Go activity around the time of the German Grand Prix, but this fell away swiftly as TV Catchup and live streaming (generally iPlayer) services took over when the Wimbledon final began. The streaming increased dramatically as the match wore on.

### Total data on EE network since launch



### Total 4G data over the Wimbledon weekend

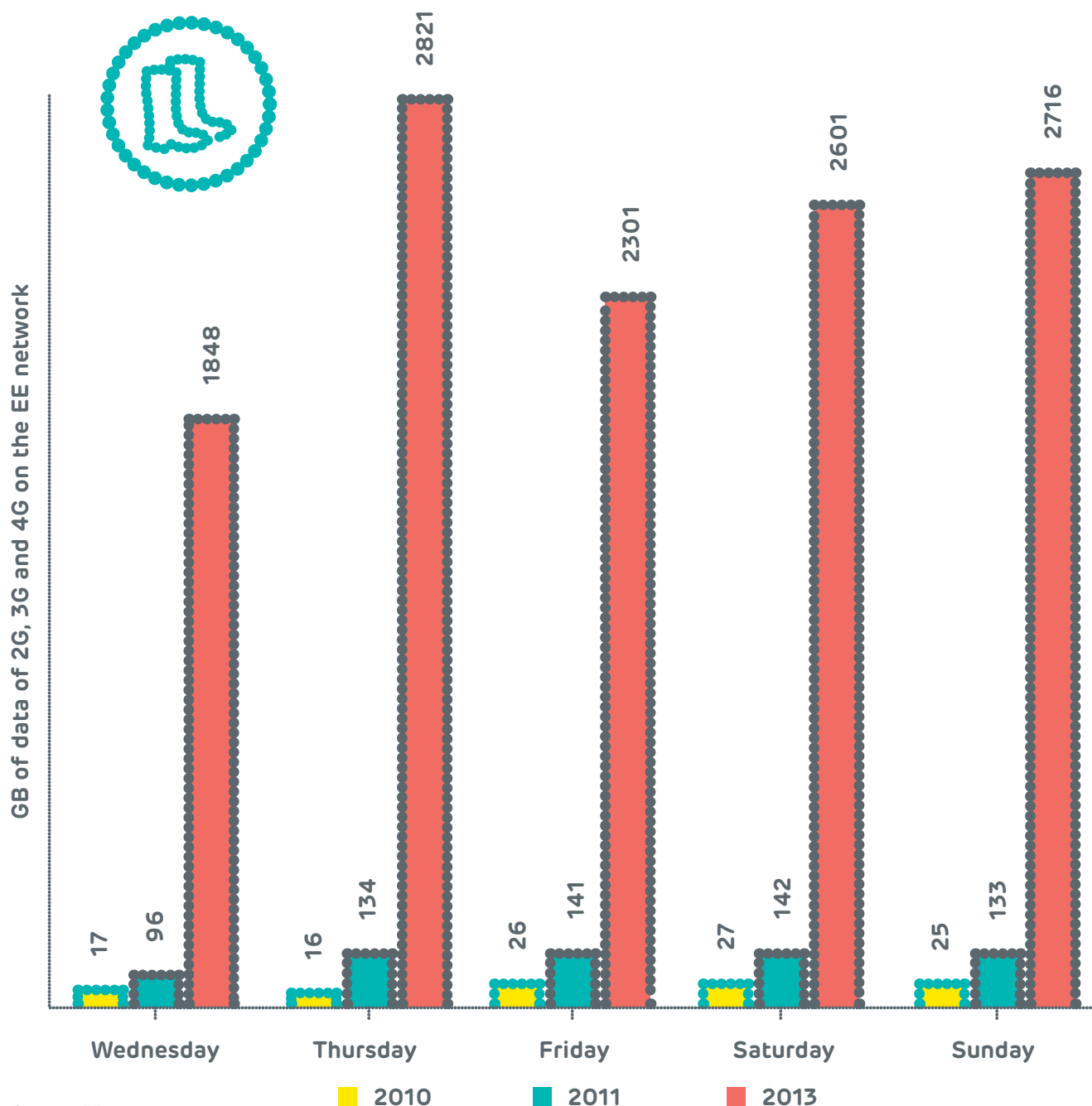


# BRITAIN LOVES SHARING PICTURES OF TENTS AND BANDS

Revellers at Glastonbury festival, where EE is an official partner, this year used 40 times as much data as they did in 2011 (the last time the festival was staged). Looking at data usage over the last three festivals we see an enormous rise in data activity which really crystallises how consumers' mobile lives are changing, creating a generation of always online individuals. Whereas in previous years many would be happy to take the cheapest phone

they own and simply text friends when they lost them in a muddy field, this year festival-goers shared images and video and stayed in constant contact with the outside world.

Thursday was the day that showed the most activity, the dip on Friday could be explained by users trying to save their phone batteries. As visitors used the on-site EE charge tents, activity began to rise again.





# WE ASKED OUR CUSTOMERS WHAT THEY THOUGHT OF 4G

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It's a lot quicker to use **tethering** over 4G because it connects superfast to the device.

**Streaming TV**, for example SkyGo, is **better on 4G** and is faster because on 3G was impossible to watch.

Everything is better, **because the network allows me to do so much more than before with my phone.**

The browsing is faster so it **encourages me to go on the internet more.** When it was 3G it was much slower so you tended not to stay on the internet. Now its 4G we use it a lot more and stay on for longer!

**I can now rely on my phone more than my computer.** It's much better and has a faster download speed. Coupled with more advanced phones, I can use it for more things.

**On my way from work I never used to have access to the internet,** like when using Facebook or if I was browsing, but now when I'm on the train I can be on my phone constantly.

The basis of my phone is for entertainment. **Everything is fast** – I can access things more quickly. I've got Deezer and it's keeping me more up-to-date with new music.