

4GEE MOBILE LIVING INDEX

First half report 2014



INTRODUCTION



Hello everyone,

Again, we've polled a thousand EE 4G customers and also dug deep into our network to find the most interesting information in there. This process has enabled us, in the last year, to reveal some trends more frequently than these half-yearly updates, and you'll find additional Mobile Living Index stats and facts with each of our financial releases, and also on our Twitter feed and Facebook page.

Looking at trends from the last year, the biggest news is the swift rise of social media, driven by embedded video. Social media now accounts for a quarter of all our 4G network activity. In March last year it was only 12%. Facebook's embedded videos and the continuing growth of companies like Twitter and Instagram – and their requirement for superfast connectivity – mean that 4G has become a huge enabler for keeping people online.

Some employers might consider this constant connectivity a potentially bad thing but, far from increasing time-wasting, 4G is actually enabling business. 77% of people claim their work productivity has grown because of 4G and, incredibly, 16% say their productivity at work has doubled. These are customers generally using their personal devices at work to make them more efficient at their job.

The FIFA World Cup directed incredible traffic across our network. Unfortunately for England, it wasn't such a successful tournament, which might go some way to explaining why, when we experienced our highest ever single moment of traffic across the network, it wasn't when England played, but when Australia's Tim Cahill scored an incredible volley in the group stages. Sadly for me, it was against the Netherlands.

Olaf Swantee, CEO, EE

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METHODOLOGY

The 4GEE Mobile Living Index is a combination of insight and analysis of the EE network and an independent TNS survey of 1,000 4G users. Network information within was gathered throughout the first half of 2014. TNS conducted phone interviews with the EE customers in May

Key Findings

- > EE hits 4.2m 4G customers. 1.3m new 4G customers in the three months to 30th June represents a European record.
- > Social media now accounts for a quarter of all traffic on the 4G network, doubling in the last year, driven by embedded video.
- > Messaging service Tango has grown to 16% of all 4G instant messaging traffic, up from less than 1% six months ago.
- > 68% of 4G customers use their personal device to work while commuting.
- > 54% of 4G customers use fewer or no public WiFi hotspots, up 12ppts in a year.
- > 30% of customers use less or no home broadband, up 8ppts in a year. 3% say they have cancelled their home broadband altogether.
- > Italy versus Costa Rica, and not an England match, generated the most traffic during the FIFA World Cup.

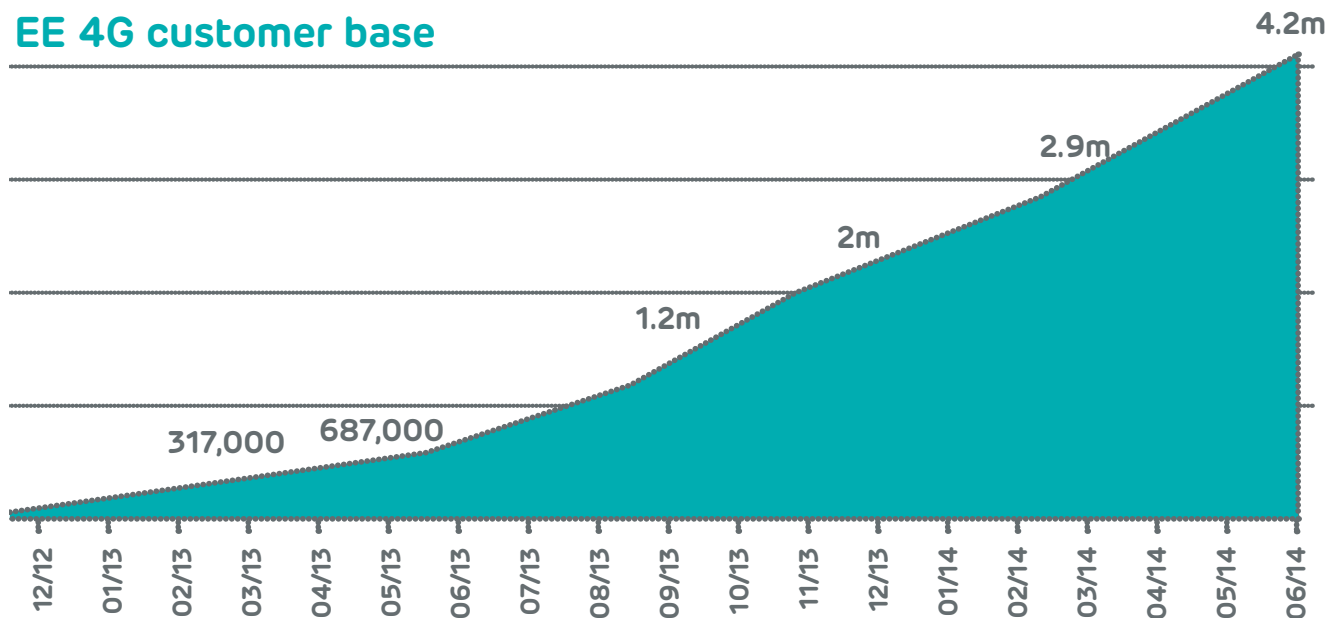
PROFILE OF THE 4G USER

WHO IS USING 4GEE?

The British appetite for superfast mobile coverage is ever-increasing, with EE posting Europe's biggest quarter of 4G additions. With growth accelerating, we look set to exceed our 6m end-of-year target for 4G customers.

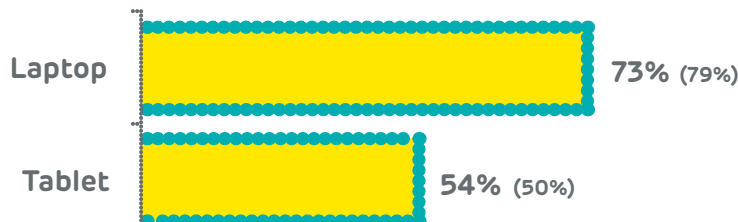
The average age of EE's 4G customers has decreased in the last six months following the introduction of lower price points for 4G plans. While there has been a lowering in the average age, each individual age-group has still seen enormous growth in 4G uptake.

EE 4G customer base



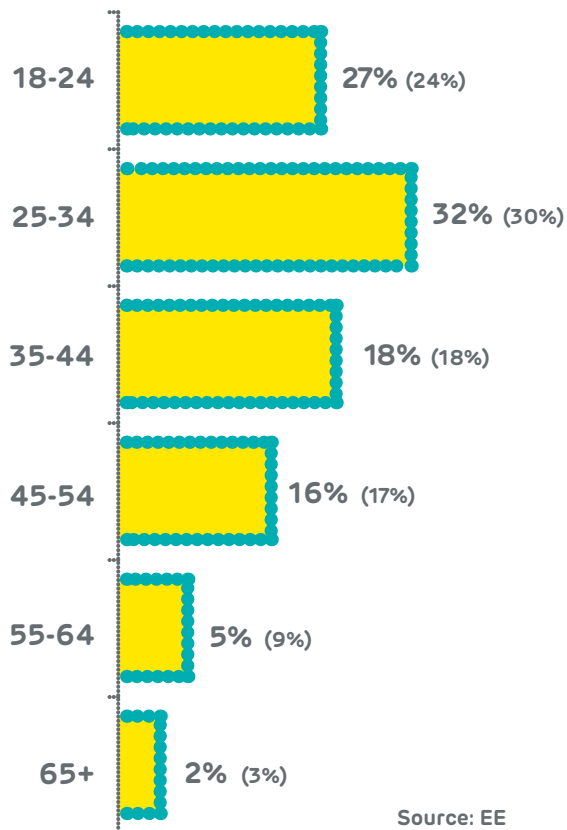
Source: EE

Other personal devices owned



Source: TNS

Age



Source: EE

Bracketed figures from December EE Mobile Living Index

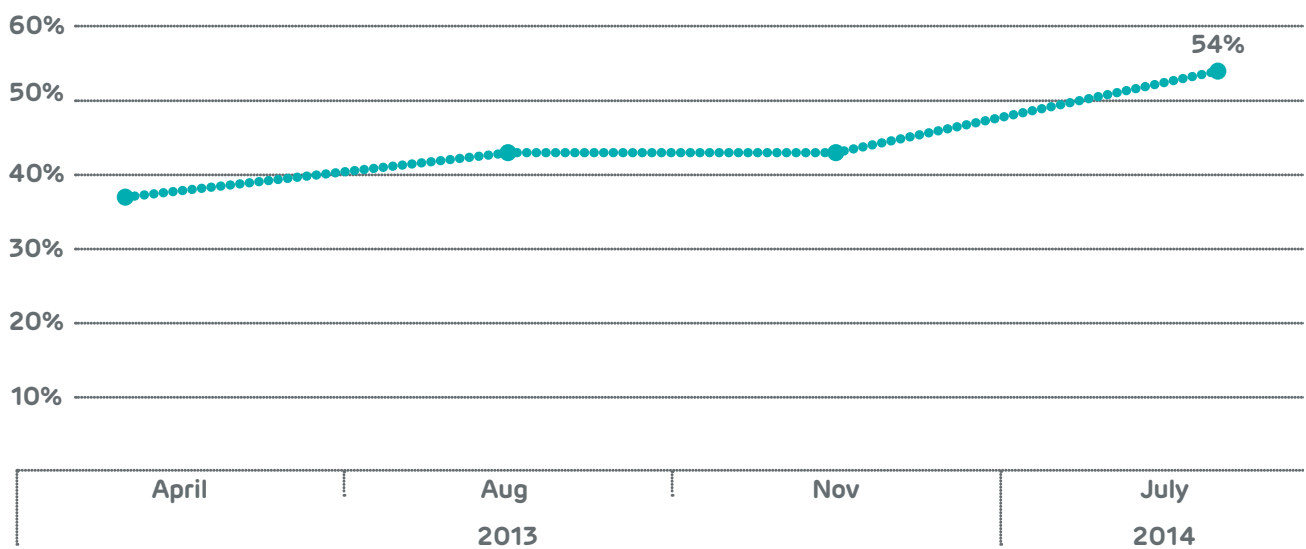
4G REPLACING SLOW WIFI AND BROADBAND

As in previous editions of the EE Mobile Living Index we've tracked how many 4G customers are turning off WiFi. It's no surprise that after announcing 2,588 rural villages and small towns – areas likely to have slower home broadband and scarce or slower public WiFi –

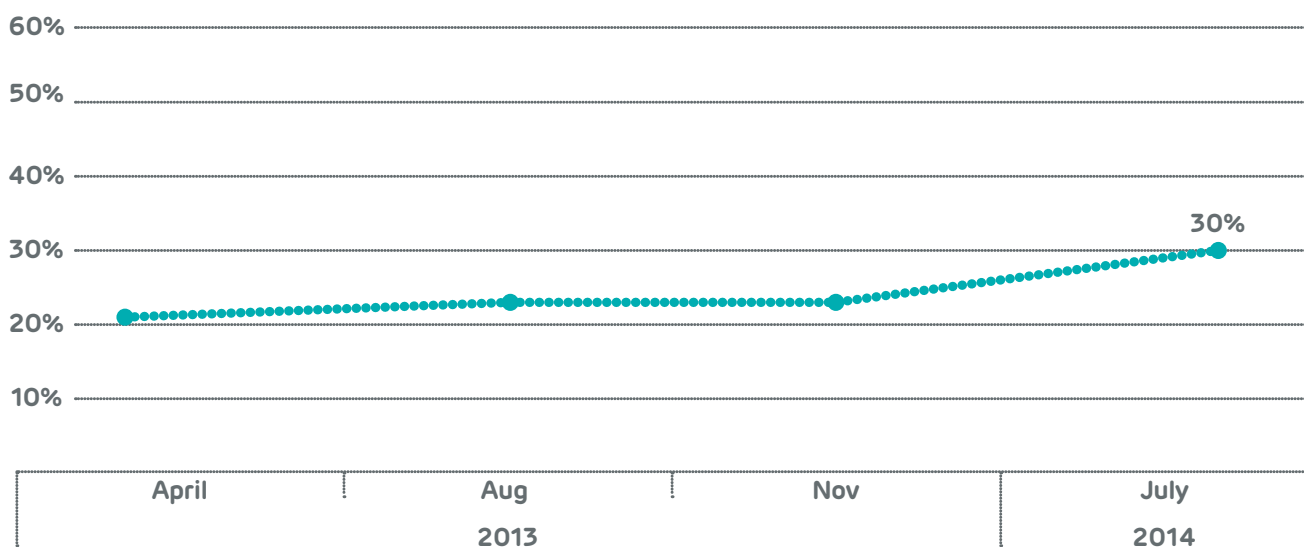
the percentage of customers opting for 4G over WiFi has picked up significantly.

Since getting 4G, 3% of our 4G customers said they have actually cancelled their home broadband altogether.

Since using 4G, what percentage of customers use fewer or no public WiFi hotspots?



Since using 4G what percentage of customers are using less or no home broadband?



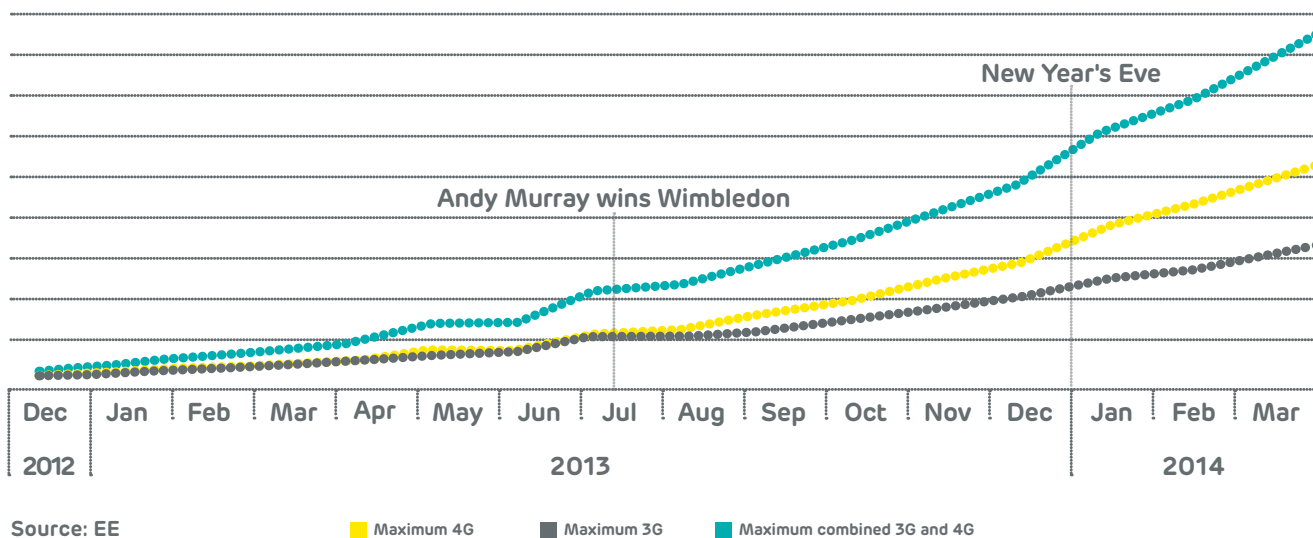
4G USER BEHAVIOUR

INDIVIDUAL AND TOTAL 4G DATA USE SOARS

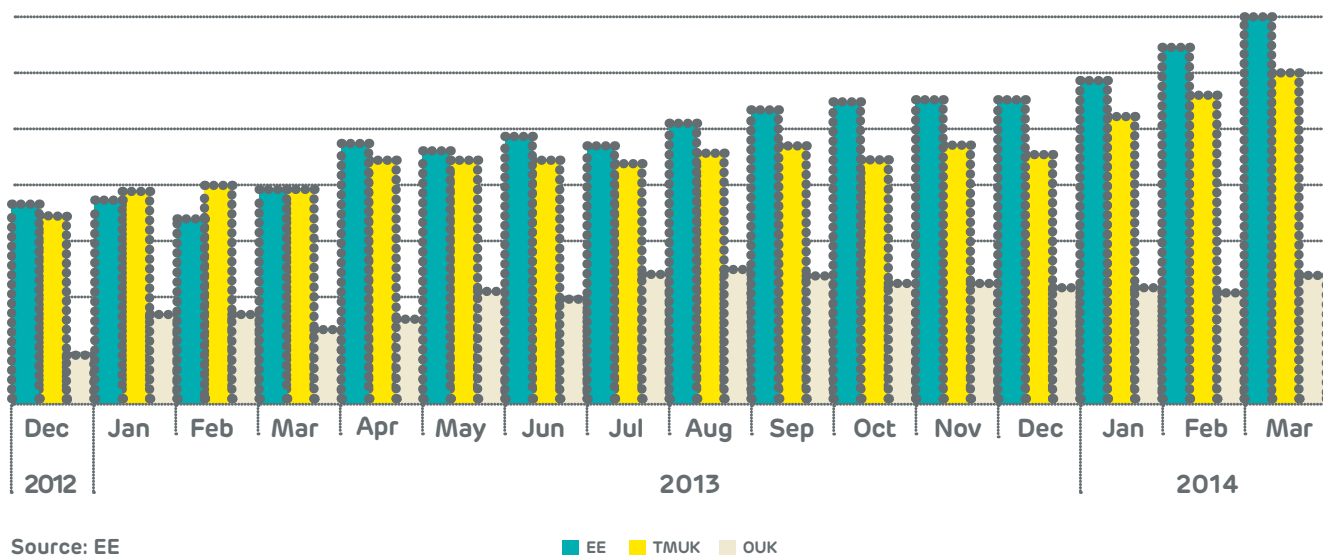
Our nationwide rollout of 4G and the ever-growing customer base is having a significant effect on network traffic. The top chart shows peak traffic – the hour with the highest data throughput – with noticeable rises around June 2013 when Andy Murray won Wimbledon, and also on New Year's Eve. 4GEE average

data per user, per month, now outstrips both Orange and T-Mobile plans, growing by two thirds in the last year, as customers get used to superfast connectivity. In total we have seen a 66% increase in data usage of the average 4G user in the last year. EE has overtaken Orange in terms of overall data used.

EE customers: peak traffic per month



Average data usage per user, per month

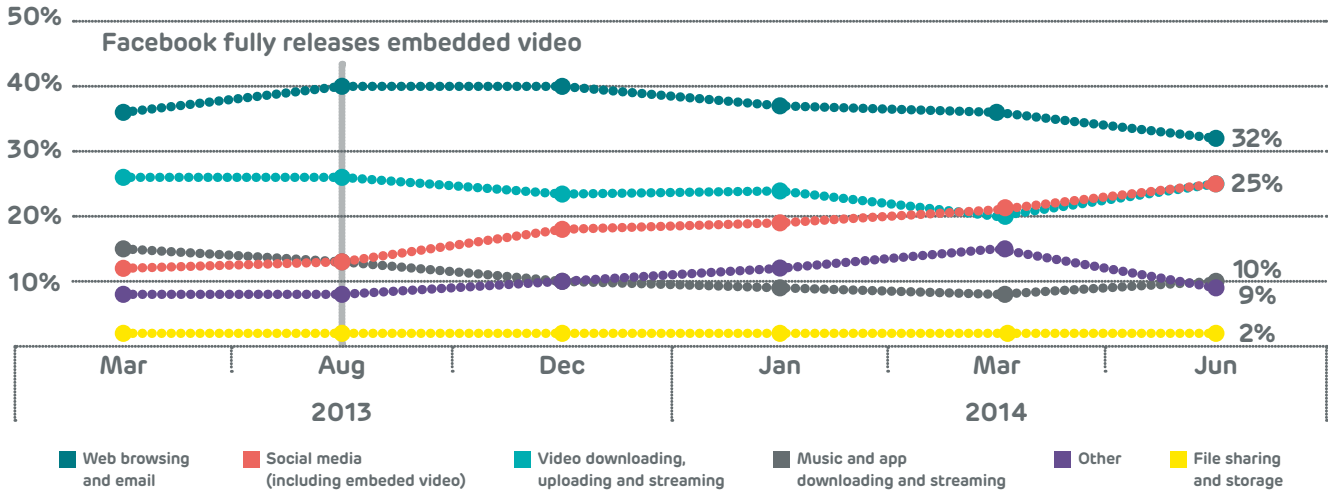


4G VS 3G: SOCIAL MEDIA CONTINUES ITS RISE

Social media usage continues to grow significantly among the EE 4G customer base, with updates such as Facebook's embedded video meaning that 25% of all 4G activity is now on social media, a rise of 7ppts

this year. On 3G, social media is also on the up, but not as quickly. In general, 4G is encouraging more data-intensive sessions on social media, with more pictures, more video and more downloading.

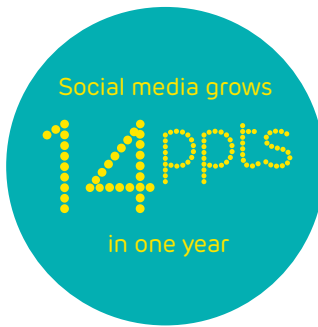
What are people doing with 4G?



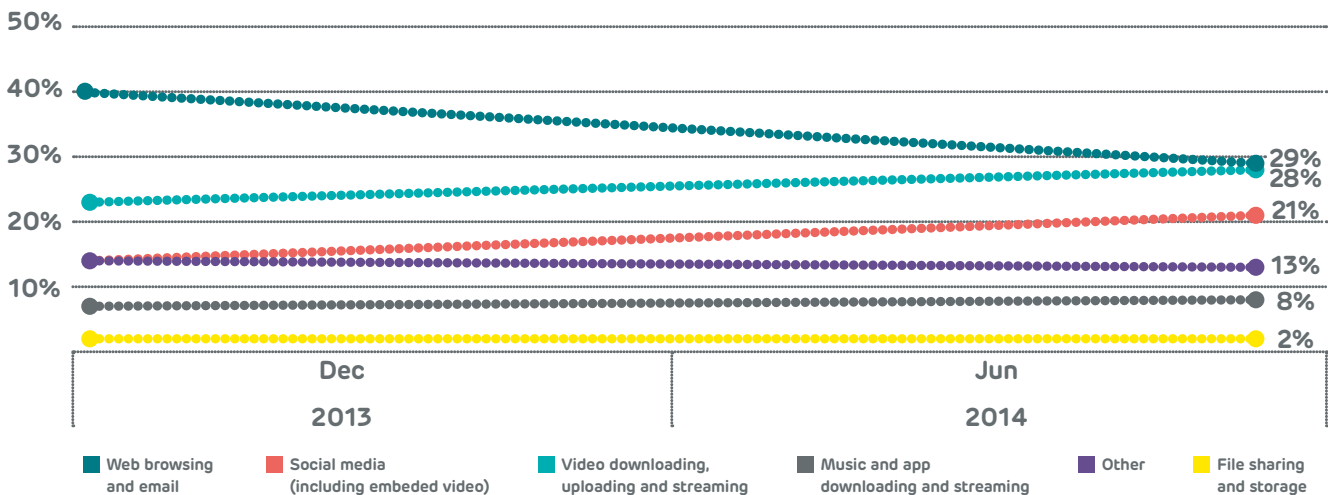
Source: EE

Social Media

Video



What are people doing with 3G?



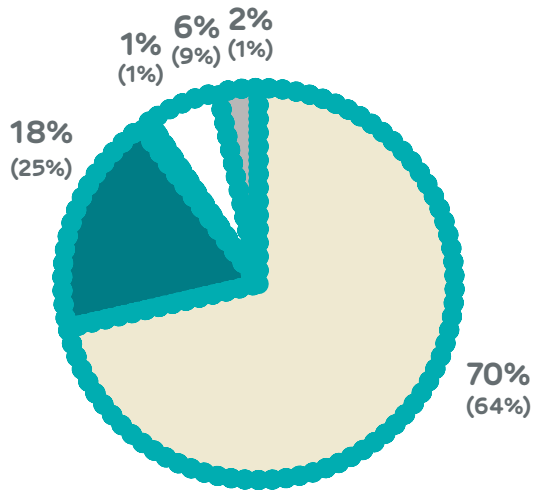
Source: EE

APPLE DOMINATES MAPS; ZYNGA GROWS GAMING SHARE

Apple's gradual improvements to its Maps product appear to be having an effect, with more 4G customers now happy to use the service over Google's.

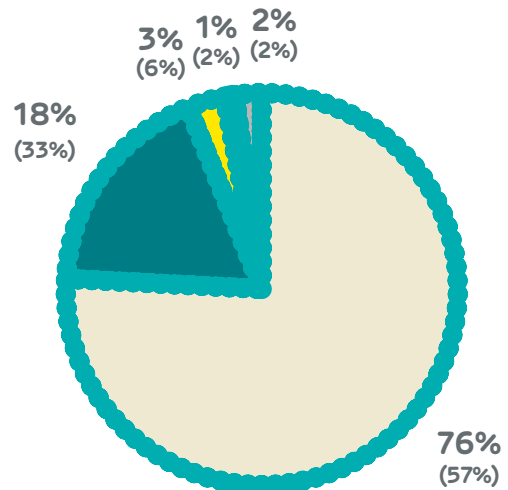
Zynga, maker of the ubiquitous and money-making Farmville app, is now contributing to a large portion of network traffic, reaching a 15% share of gaming traffic.

Mapping 4G



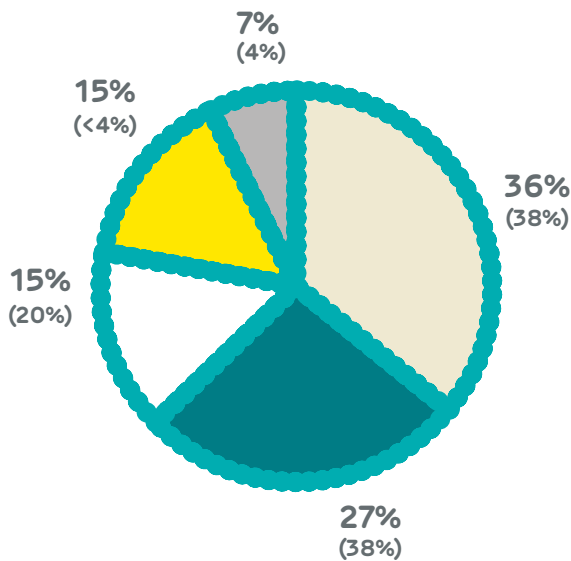
- iOS (Apple) maps
- Google maps
- Google earth
- Bing maps
- Other

Mapping 3G



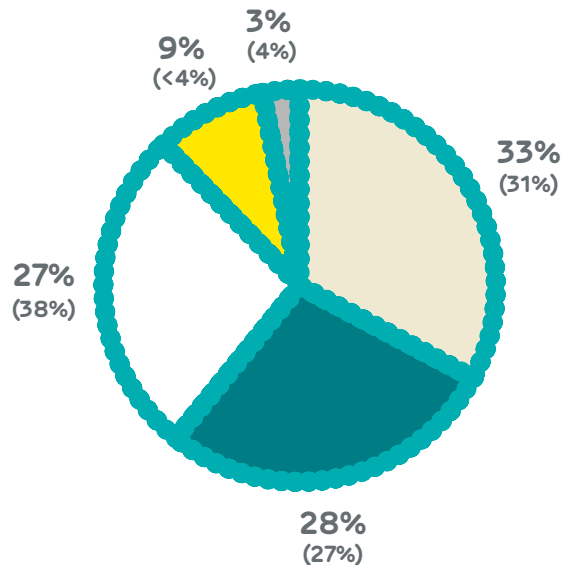
- iOS (Apple) maps
- Google maps
- Google earth
- Bing maps
- Other

Gaming 4G



- Playstation Network
- Steam
- Xbox Live
- Zynga Games
- Other

Gaming 3G



- Playstation Network
- Steam
- Xbox Live
- Zynga Games
- Other

Bracketed figures from December Mobile Living Index

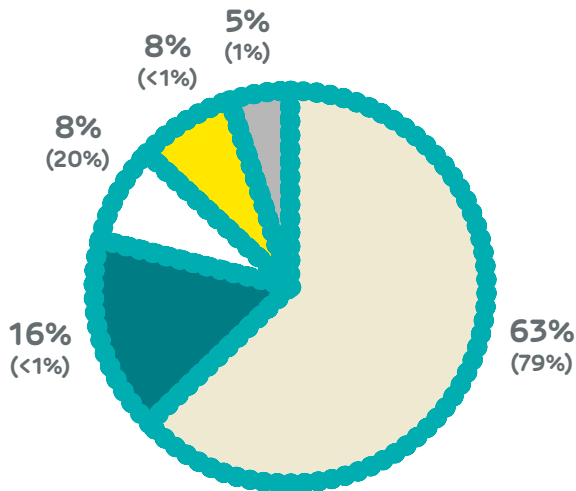
Source: EE

TANGO SEES MASSIVE GROWTH AND TAKES WHATSAPP SHARE

Customers are using more data over 4G but their messaging habits stay the same. The real surprise here is the rise in use of messaging service Tango. Its users frequently send video and picture messages and now

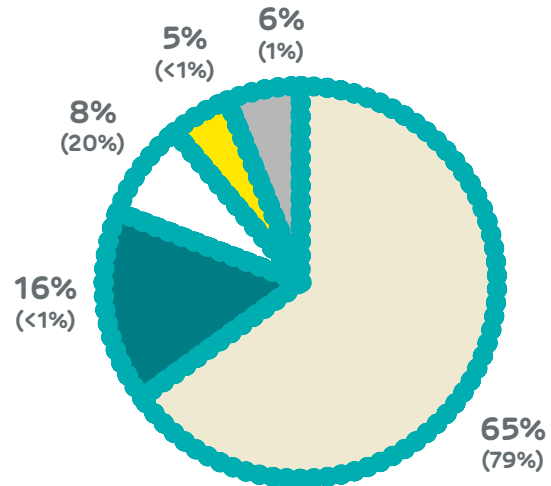
account for 16% of all messaging data traffic. Deezer is far more popular on 4G than 3G, with many 4G customers using it as part of a bundle.

Instant messaging 4G



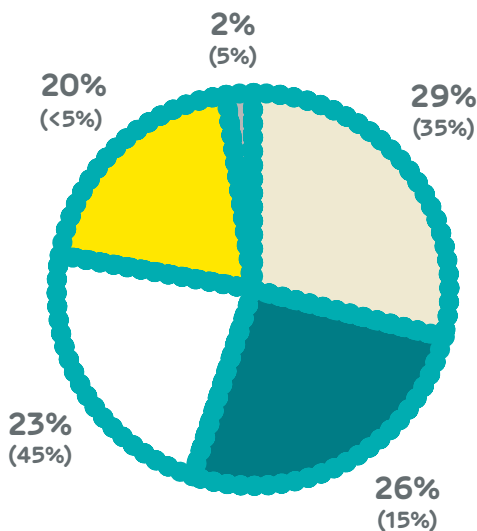
- WhatsApp
- Tango
- iMessage
- Blackberry Messenger
- Other

Instant messaging 3G



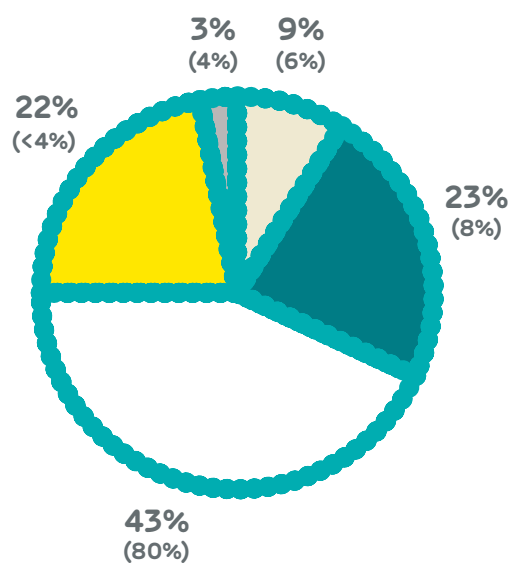
- WhatsApp
- Tango
- iMessage
- Blackberry Messenger
- Other

Audio 4G



- Deezer
- Spotify
- HTTP Audio
- Soundcloud
- Other

Audio 3G



- Deezer
- Spotify
- HTTP Audio
- Soundcloud
- Other

Bracketed figures from December Mobile Living Index

Source: EE

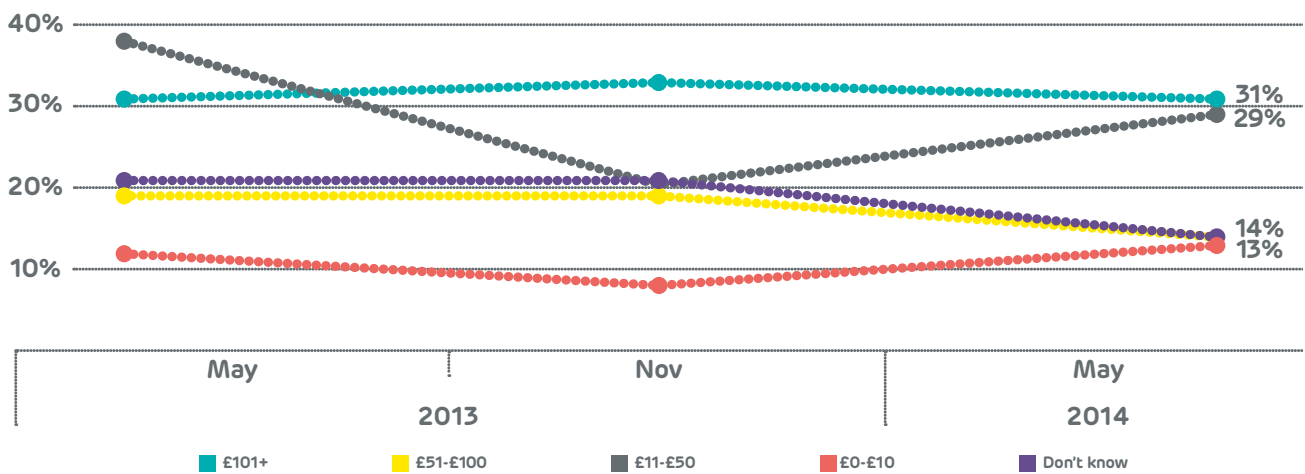
4G ON THE MOVE

4G ENABLES FASHIONISTAS TO SHOP ON MOBILE

We have further proof that 4G has moved shopping from the high street to the internet, as fashion becomes the most popular mobile purchase - a third of all shopping sessions are for clothing. Amazon remains the most popular shopping outlet as it continues to diversify away from its media heritage. Overall, the average amount of

money spent over 4G in the last six months has slipped very slightly, largely because the last Mobile Living Index was compiled before Christmas – the fact the figures remain so close indicates that Christmas 2014 should be even bigger than last year for shopping over mobile.

Amount spent over the past month shopping online using 4G



Shopping for fashion is the most common form of online shopping at **34%**. Fashion shopping is highest proportionally among iPhone users.

Amazon is the most used outlet with **28%** of all mobile shopping.

4G
28%
shop more on mobile with 4G (December 23%)

70%
use their mobile for shopping

Source: TNS

4G ENABLES BUSINESSES TO BE MORE PRODUCTIVE

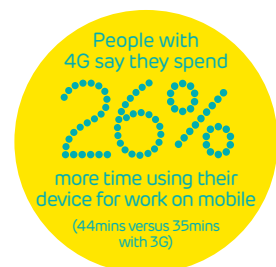
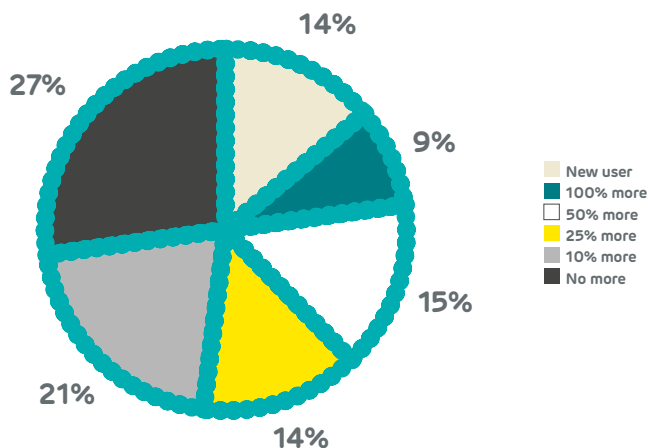
For the first time there is a generation of mobile users with personal devices that outstrip the functionality of the ones given to them by their employers. Because of this, more consumers are able to perform work tasks on the go and on the commute. In fact, proportionally more consumers work on their personal phones while commuting (68% versus 60% for work devices). 4G is also driving business productivity. Over a third of people that use 4G for work are seeing output improve by 25%.

16% say that 4G devices have doubled their overall productivity, with consumers instinctively taking advantage of EE's 4G speeds to get work completed more efficiently. The image of an employee on their personal phone during work hours is probably not one that most businesses enjoy, but more than one in ten 4G users constantly use their phone during work hours for work purposes.

Consumers are using their personal phones to work while commuting



Percentage increase in time spent doing work when customers switch to 4G



Source: TNS

4G GIVES BRITAIN BACK ITS LEISURE TIME

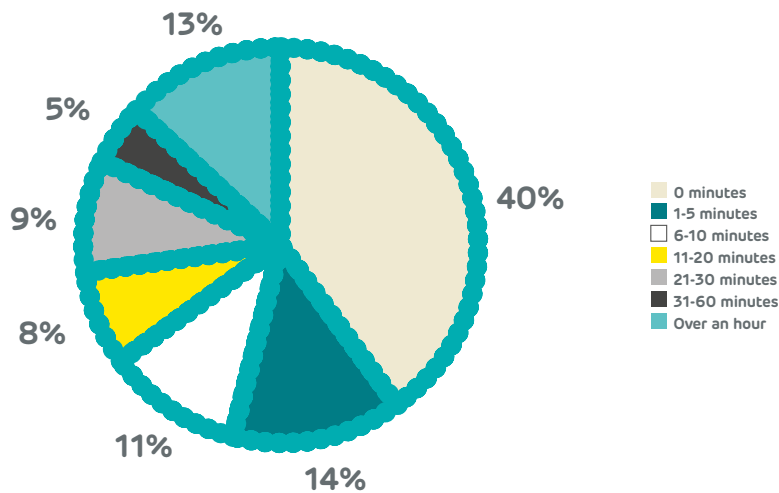
Looking at the amount of leisure time access to superfast mobile broadband is giving affording our customers, it's clear that 4G is changing people's lives.

13% of customers say they have an hour or more's free time every day since switching to EE's 4G service.

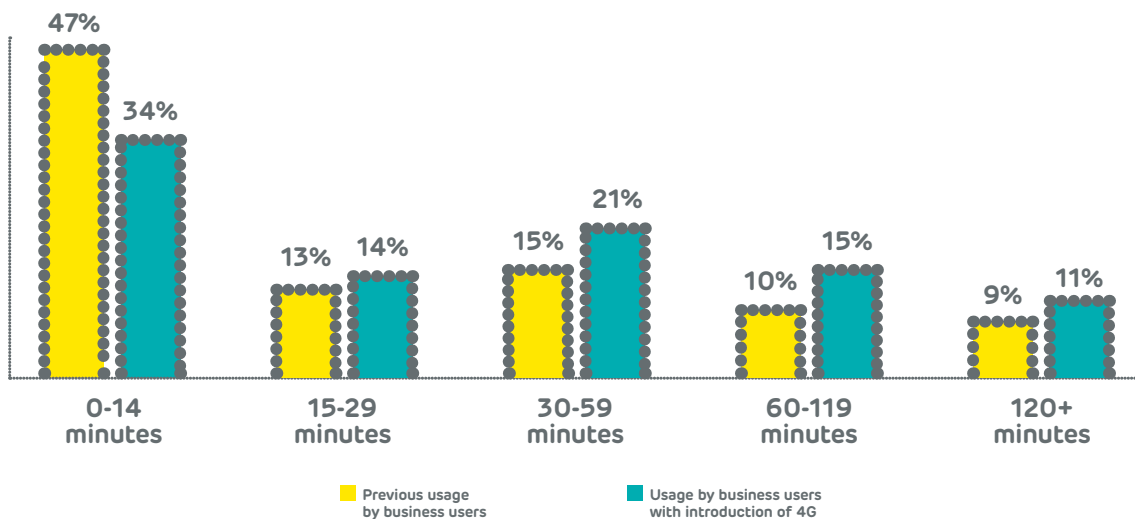
There seem to be three possible reasons for this. First, as shown by the bottom chart on this page, people

who use a mobile for work are spending more time on mobile broadband, getting work done. Second, superfast access everywhere means tasks such as banking can be performed on-the-go without the need for joining long high-street queues. Third, formerly dead commuting time can now become leisure time, with customers streaming video or catching-up on social media to pass the time.

How much leisure time per day do you gain when you use 4G, compared to when you use 3G?



Number of minutes per day using mobile broadband before and after the introduction of 4G.



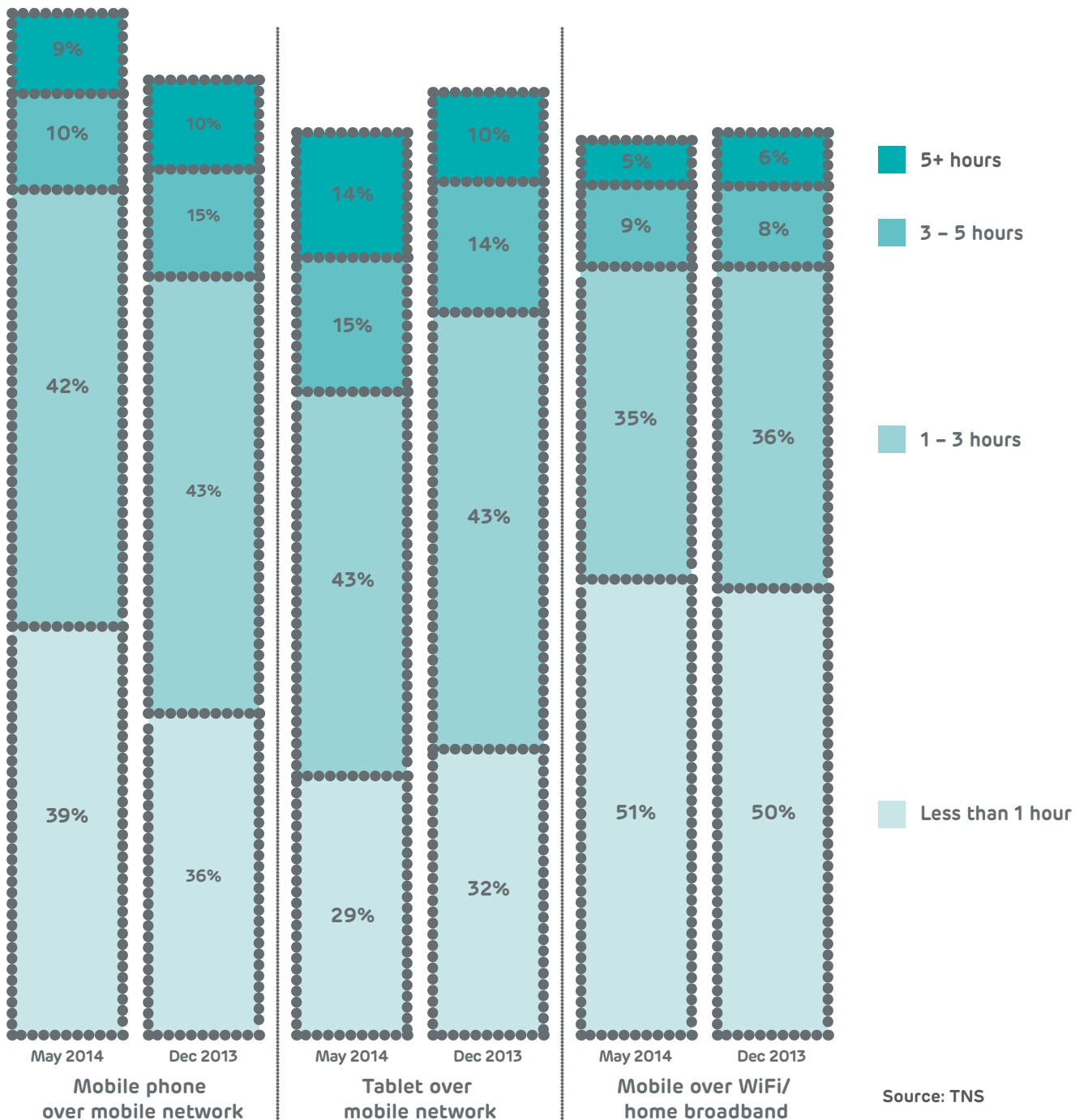
NETWORK USAGE

PORTRAIT OF A MOBILE LIFE

Usage of 4G versus WiFi over long periods of time remained relatively stable through the first half of 2014. Though increasing numbers of consumers are turning off WiFi (see page 5) it appears to be for shorter sessions. Part of the reason 4G customers give for this is that certain services are not yet fully optimised in line with the quality of the EE 4G experience, so they switch to WiFi, even though the connection itself may be slower. To address this we have founded the Mobile Video Alliance (MVA), which is run by the Digital TV Group (DTG), which represents the UK's broadcast industry. The MVA connects broadcasters and content

owners with mobile operators for the first time to create the best possible experience of mobile video apps. Broadcasters have mastered content delivery to the home, to the web, and now they're focusing on the third axis – mobile platforms.

We've also embarked on a programme for selected video and TV content owners, who want an optimum user experience for their customers over EE's 4G network. For example, working with the BBC iPlayer team has already seen significant improvements for their customers on the speed of programme load times.



Source: TNS

Where columns do not add up to 100, customers recorded an answer of 'don't know'.

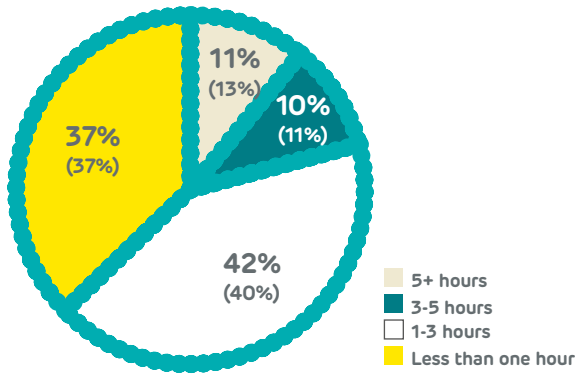
PORTRAIT OF A DIGITAL LIFE

Major companies are developing mobile-first websites and inserting video and interactive content into their apps to take advantage of widespread superfast connectivity. Likewise, our 4G customers say they are adapting their habits. A 6ppts rise in

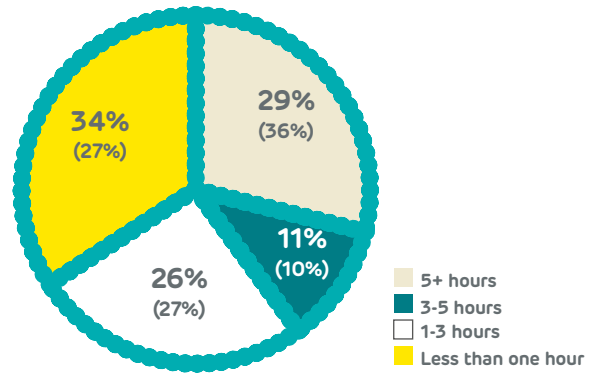
customers saying they are conducting online banking and social media via 4G was the most marked increase, but everything except the downloading and updating of apps tracked upwards.

Time spent accessing the internet

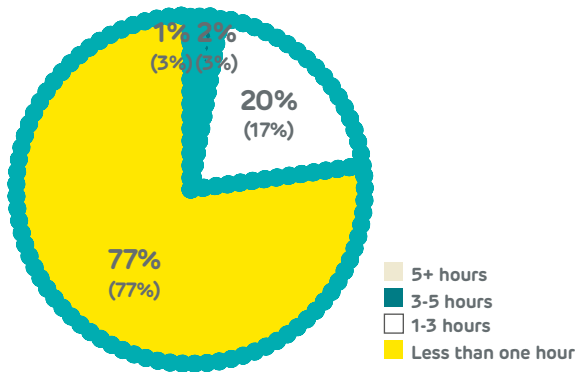
Mobile network



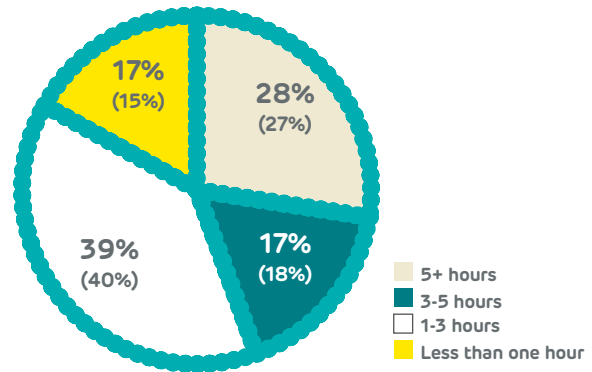
Work broadband



Public WiFi

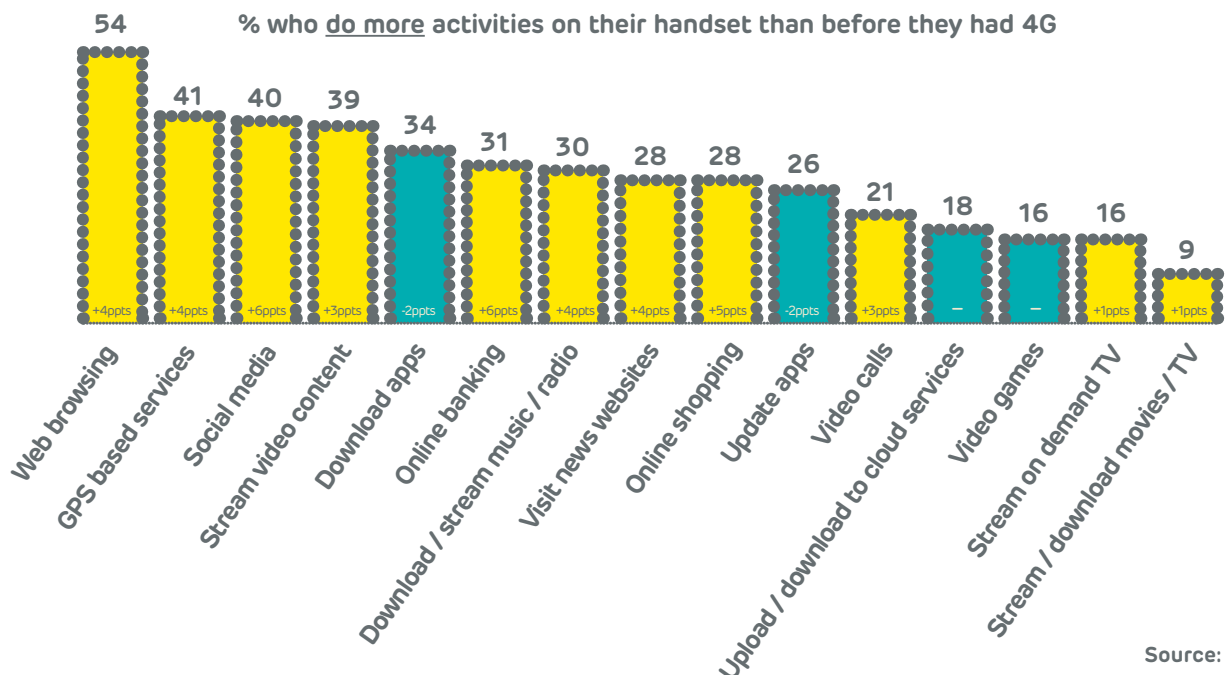


Home broadband



Bracketed figures from December EE Mobile Living Index

What are you doing more of since switching to 4G?



Source: TNS

NETWORK ACTIVITY

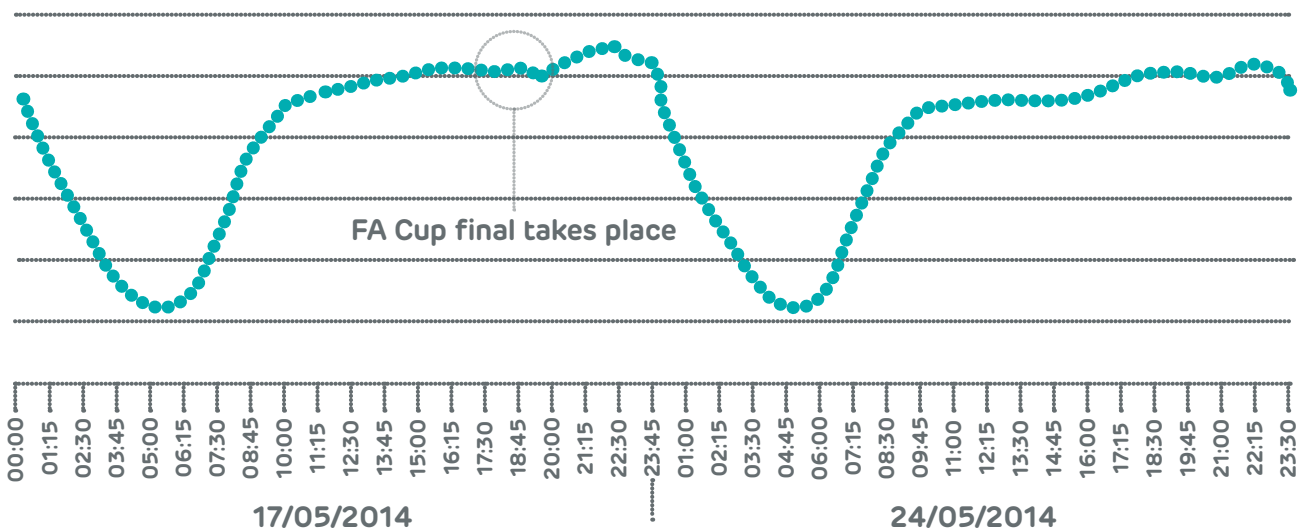
SCORING BIG ON 4GEE

One of the biggest drivers of network activity continues to be streaming and talking about football matches. The top chart shows the day of the FA Cup Final saw a 10% uplift in network activity. Looking in more detail at the chart below, there was a sizeable peak in Sky Go activity just after 6pm (which

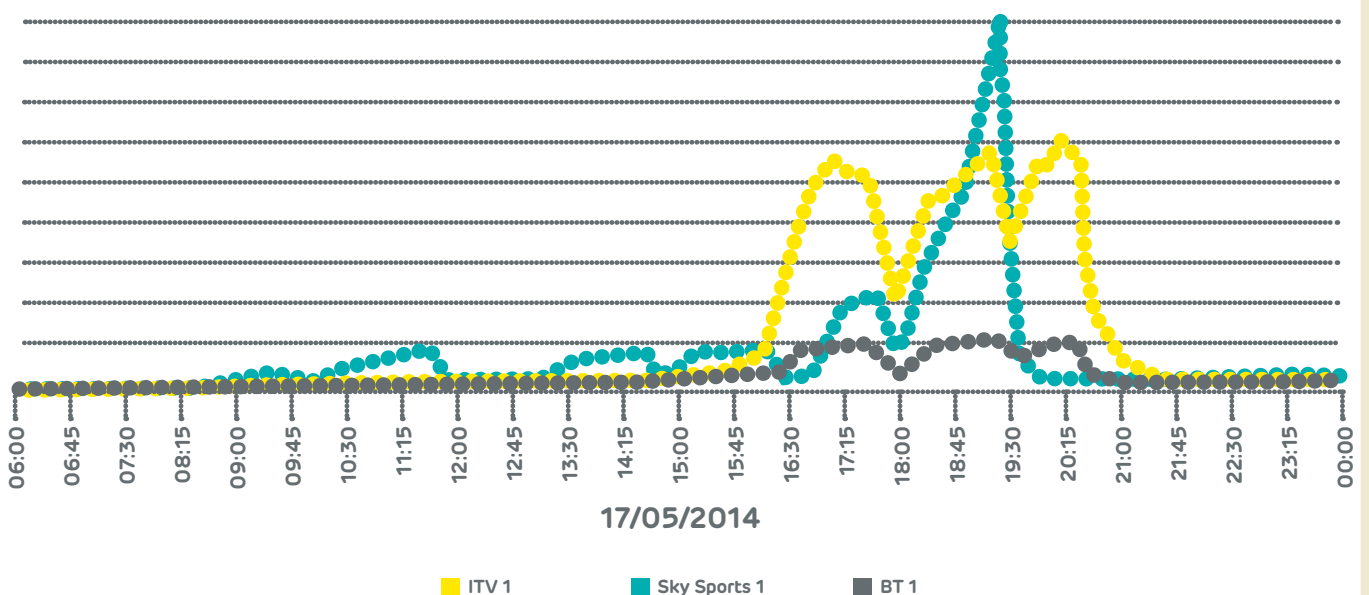
also shows as a minor peak on the graph above). At this point fans were 'dual screening', watching the FA Cup Final on terrestrial TV and checking out the title-deciding final match of the Spanish football season, Barcelona versus Atletico Madrid, on Sky Sports.

Football

FA Cup Final – 10% uplift in overall network activity



FA Cup Final – peak on Sky Go around 6pm when customers were streaming the final match of the Spanish football season



Source: EE

TIM CAHILL LIGHTS-UP 4GEE

We expected the highest data peak (single point in time when we see the most data travelling across the network) we'd ever seen on the EE network to be during the FIFA World Cup. When England matches were on, and when matches started during work hours (there were a number of group games that began at 5pm) we saw between a 5% and 15% uplift in general network activity. However, it was a wondergoal, scored

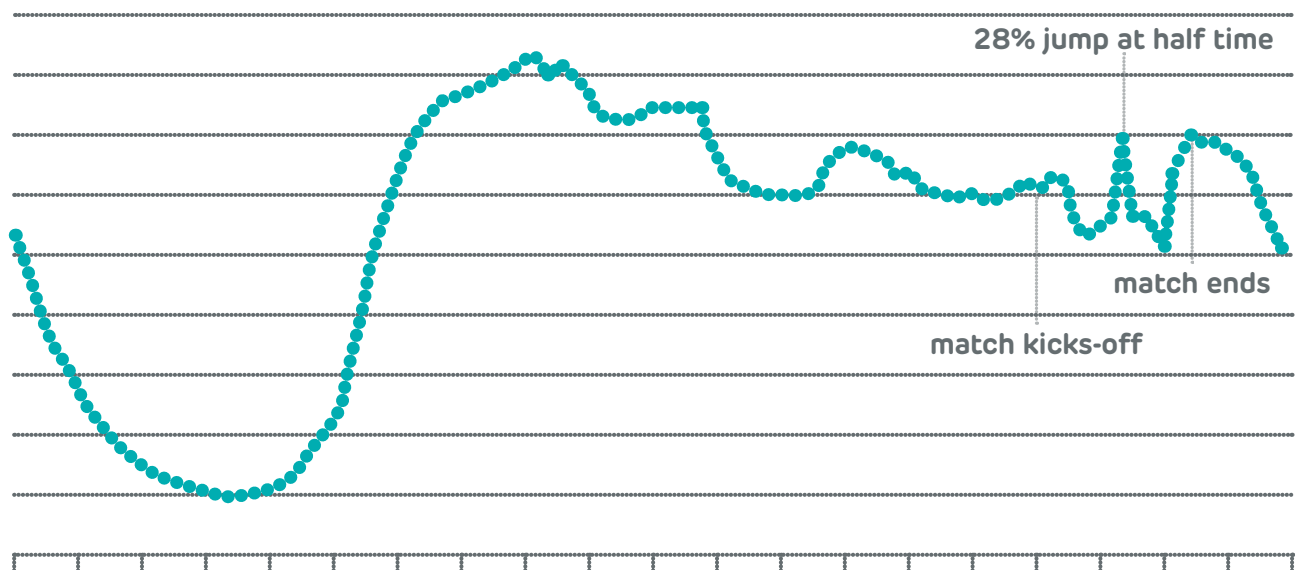
by Australian stalwart Tim Cahill at 5:21pm that broke records. So good was the goal, that fans watched it over and over again on social media and on TV replays, setting a new network high that may not be beaten until New Year's Eve.

Facebook traffic jumped 28% at half time during the England versus Uruguay match.

The Top 10 World Cup games, in terms of traffic, on the EE network:

1	Costa Rica vs Italy	17:00 K.O.	Friday 20th June, Group stage
2	England vs Costa Rica	17:00 K.O.	Tuesday 24th June, Group stage
3	Uruguay vs England	20:00 K.O.	Thursday 19th June, Group stage
4	Brazil vs Germany	17:00 K.O.	Tuesday 8th July, Semi-final
5	France vs Germany	17:00 K.O.	Monday 30th June, 2nd stage
6	Germany vs Portugal	17:00 K.O.	Monday 16th June, Group stage
7	Netherlands vs Argentina	21:00 K.O.	Wednesday 9th July, Semi-final
8	Belgium vs USA	21:00 K.O.	Tuesday 1st July, 2nd stage
9	Argentina vs Switzerland	21:00 K.O.	Tuesday 1st July, 2nd stage
10	Brazil vs Colombia	21:00 K.O.	Friday 4th July, Quarter-final

EE 4G Facebook volume on day of England v Uruguay World Cup match



4GEE HELPS LONDONERS GET TO WORK DURING THE TUBE STRIKES

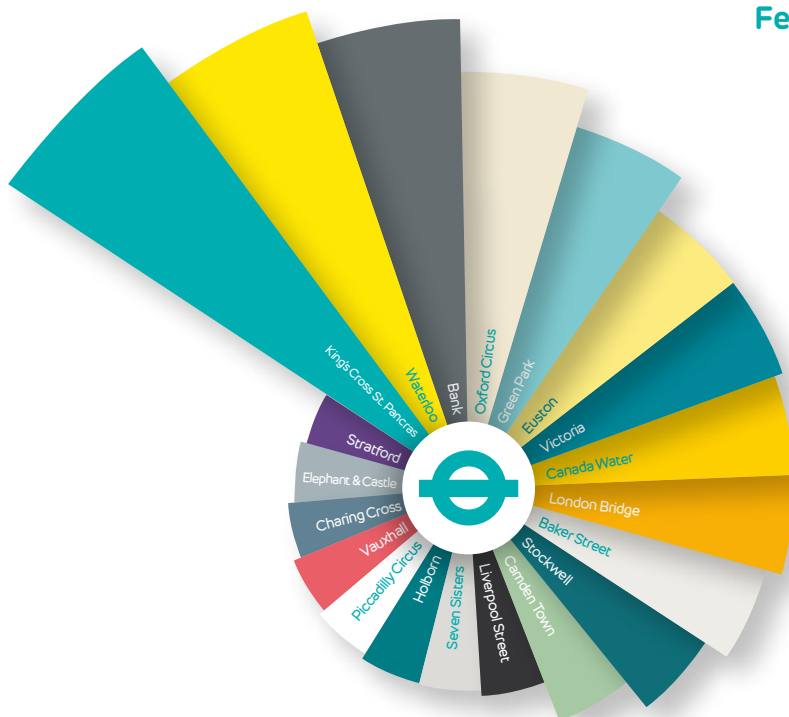
February's much documented and often lamented Tube strikes saw millions of Londoners find alternative routes to work. To do so they turned to the power of 4G. We saw massive data spikes for map activity across London, and increased use of Twitter and Facebook as Londoners complained about or documented their journey.

EE's partnership with Virgin to provide free WiFi for its


customers on the Underground has enabled 4G users to experience almost seamless connectivity throughout the nation's capital. Analysis of the WiFi network finds that Kings Cross St Pancras is the station where customers use the most data. Green Park is the 5th highest station for data, but only the 16th busiest in term of volume of passengers. Clearly customers like to check social media before getting off at Piccadilly Circus.

How 4GEE kept Londoners moving during the tube strike


WiFi data volumes on tubes in February 2014



Underground data: What happened on the EE network the first day of the February tube strikes?

 **12%** more Londoners used their 4GEE phones in the morning rush-hour as they turned to mobile to solve their travel problems.

 Travel-impaired Londoners used, on average, **18%** more data during the morning rush hours of the 48-hour strikes.

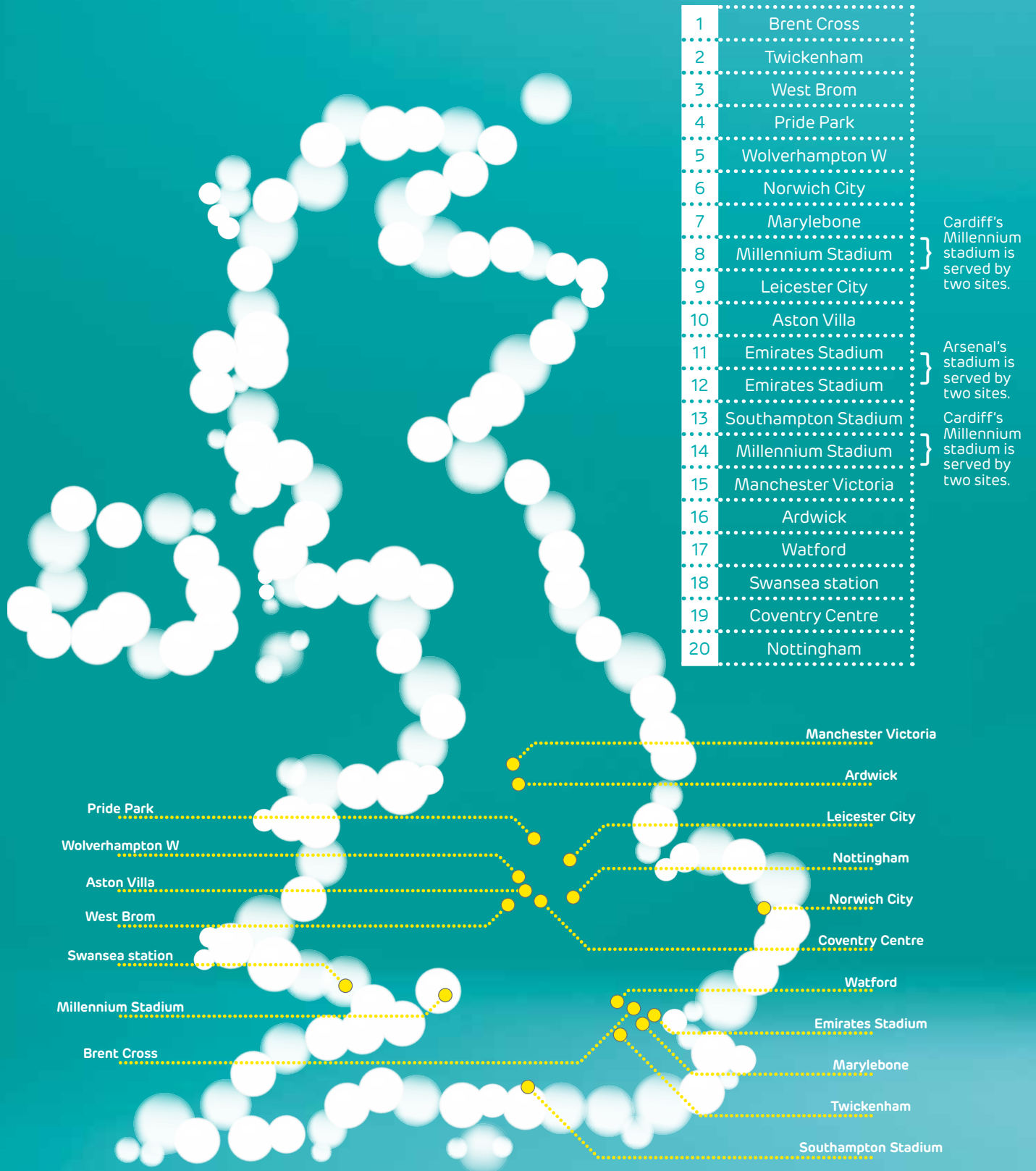
 Google maps data use was **31%** higher than the average weekday. Google Maps traffic also peaked at 8am - earlier than average.

Twitter traffic grew **14%** and Facebook **8.5%**

Source: EE

SHOPPING, SPORTING AND STATIONS: THE 4GEE NETWORK HOTSPOTS

We picked the second week in February and examined which of our mobile sites generated most traffic.



FACEBOOK AND WHATSAPP – HOW DOES USAGE CHANGE AS SPEED IMPROVES

Social media and multimedia messaging are ideally suited to 4G, with its high bandwidth ensuring a seamless experience and live conversation for users. Looking at both our 3G and 4G users we can see a marked difference in the numbers that adopt these apps. On average there is around a 5% uplift in the average

number of people using Facebook and WhatsApp when they switch to 4G. As social media evolves further to embed video, we expect to see this gap grow.

We see around a 5ppts higher adoption of Facebook among 4G users (compared to 3G) and around 2ppts higher WhatsApp adoption

Facebook and WhatsApp app adoption as a percentage of total 4G users

