

4GEE MOBILE LIVING INDEX

First-half report 2015



INTRODUCTION



Hello everyone,

It's been a while since the last EE Mobile Living Index in August 2014, and we've taken that time to refine some of the ways in which we gather information and group activity on our network. It means the information on the following pages gives even more insight than ever before. A good example is that, for the first time we can now reveal social media and music service SoundCloud accounts for nearly half of all the audio activity over our 4G network.

It's the 4G network that is really driving such changes. Our network advancements have truly unlocked the power of the mobile internet, so much so that customer usage is doubling every 24 months and we predict the network will manage more than one exabyte of data per year by 2018. That's a huge amount, it's enough to fill 42 million Blu-ray disks. By comparison, back in 2012, my first full year at EE, that number was 61 petabytes (roughly 2 million Blu-ray disks).

For this EE Mobile Living Index we've also had a specific look at health and fitness apps. We are beginning to see these active in increasing volumes on our network, helped in no small part by the fact that they are now even embedded in operating systems, such as Apple's Health app. We asked whether customers would like to extend the use of these apps, perhaps even using them to change how they interact with their GP. The reaction was an overwhelming 'yes', highlighting again how 4G is opening up new possibilities and changing people's relationships with their mobile networks.

Lastly, on pages three and four you'll see images we've commissioned to visualise what a 4G network looks like. The images are intricate and beautiful, and I think that's a pretty accurate description of the network we've created.

Thank you

Olaf Swantee, CEO, EE

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METHODOLOGY

The EE 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 second half of 2014 and the first quarter of 2015. TNS conducted phone interviews with the EE customers in November 2014.

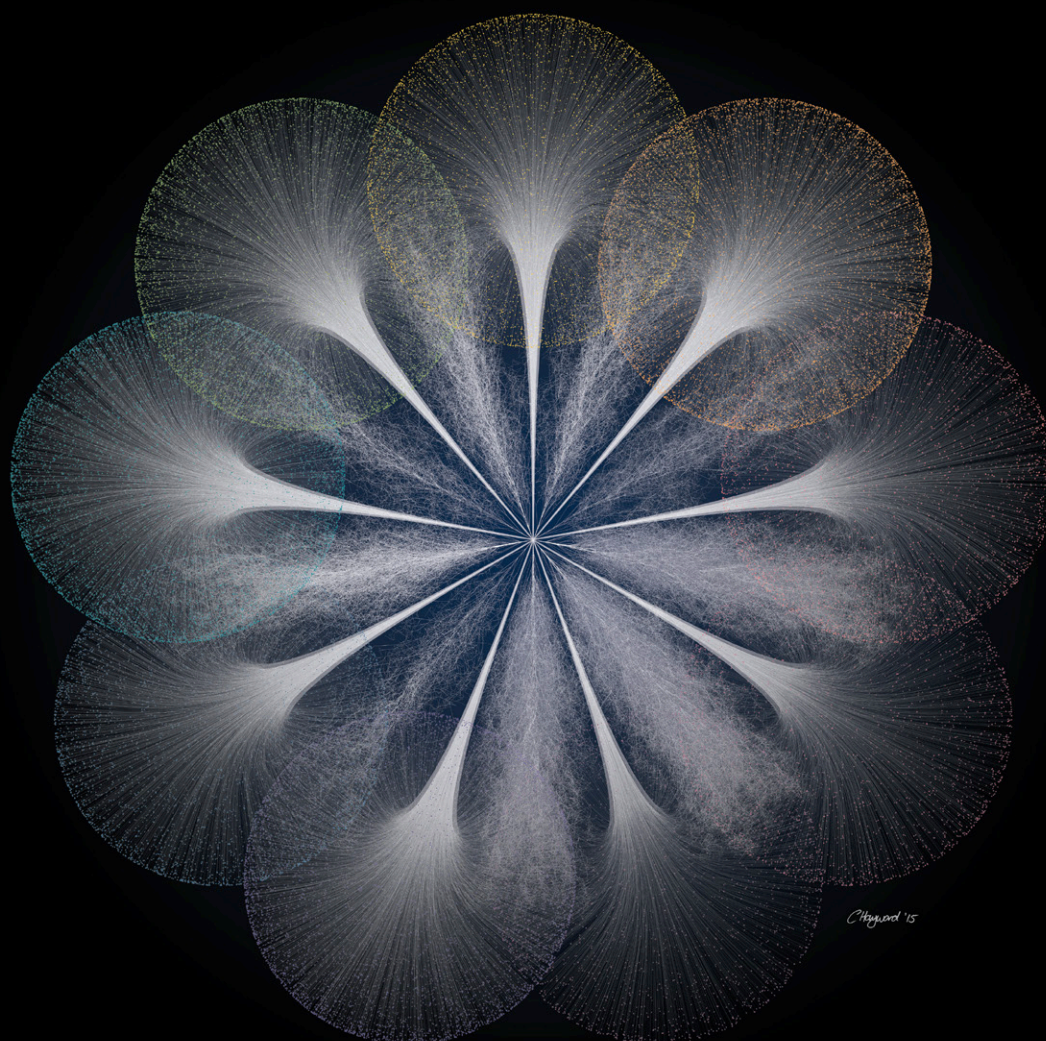
Key Findings

- > EE reaches 10 million 4G customers
- > Video streaming and social media dominate 53% of network traffic
- > EE predicts that a colossal one exabyte of data (1,000,000,000,000,000,000 bytes) will be carried across the network per year by 2018
- > Almost half (44%) of all music streaming is via SoundCloud, well ahead of Spotify (29%), Deezer (10%) amongst EE's 4G customers
- > Nearly 50% would happily conduct video consultations with GPs rather than visiting the surgery in person
- > Two in three people say they would like to use online prescriptions

WHAT DOES A 4G NETWORK LOOK LIKE?

Having reached 10 million 4G customers, we commissioned data visualisation expert Colin Hayward to show exactly what a day's network activity looks like.

EE's 4G network: A day in data



Key

Actions

Each point represents:

- 2,000 social media sessions
- 15,000 instant messages
- 50 map sessions
- 5 gaming sessions
- 10 video calls
- 10 app downloads
- 100 music tracks streamed
- 15,000 web pages loaded
- 250 videos streamed

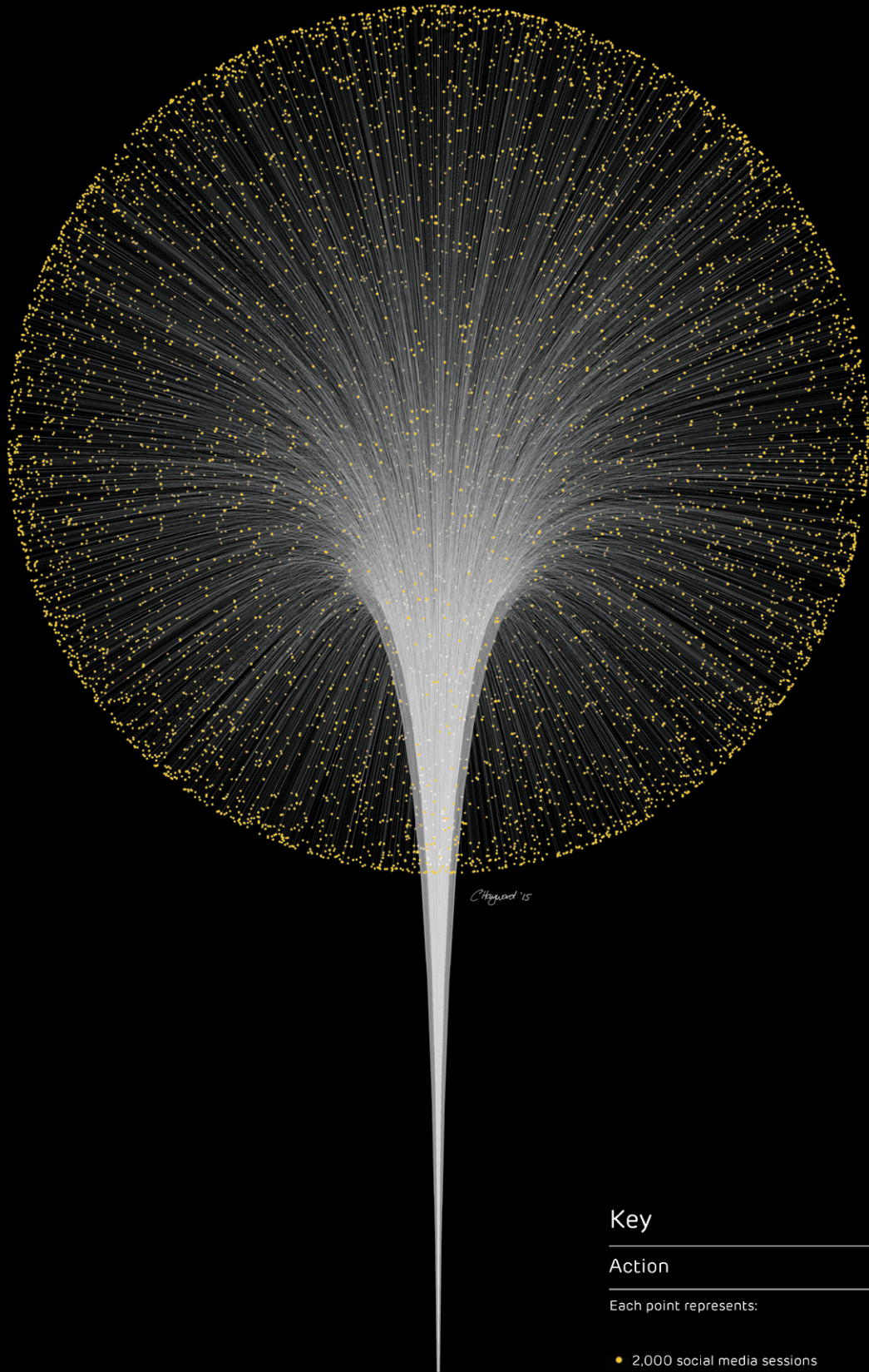
Data volumes

Each vertex in the corresponding network structure represents:

- 100MB
- 50MB
- 10MB
- 10MB
- 100MB
- 100MB
- 100MB
- 100MB
- 100MB

EE's 4G Network: A day in data

Social Media Activity



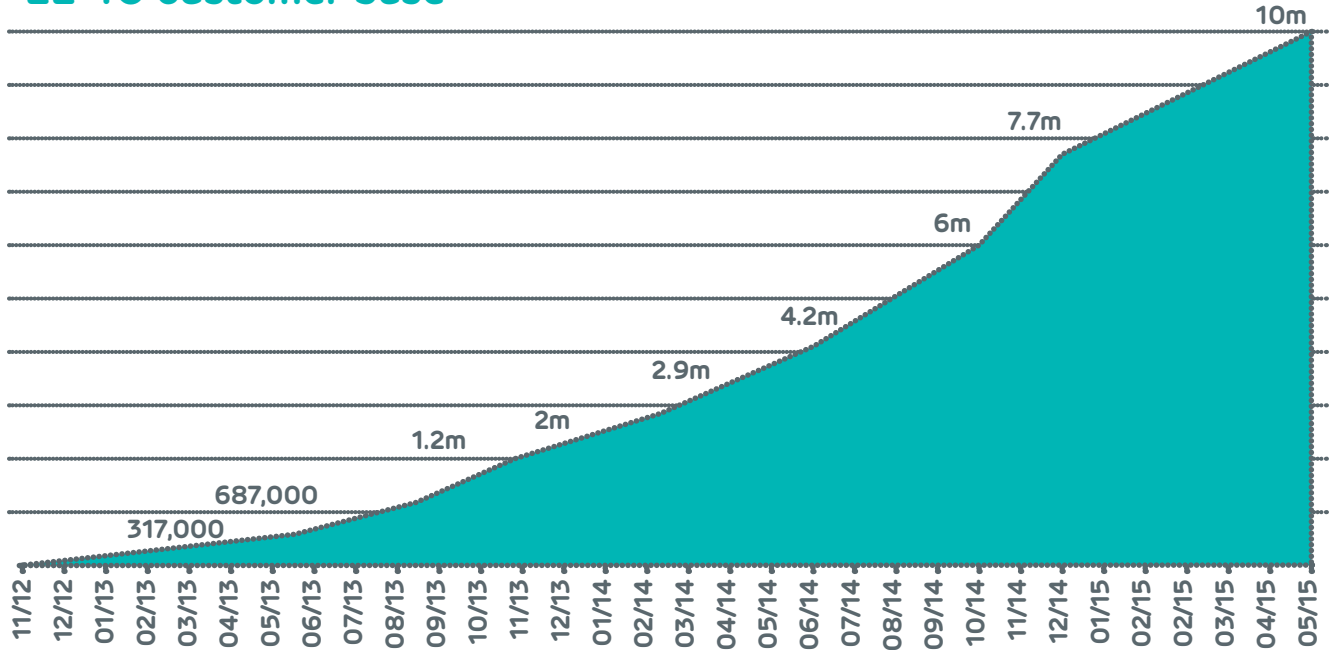
PROFILE OF THE 4G USER

WHO IS USING 4GEE?

In May 2015, EE became the first operator in Europe to reach 10 million 4G customers, continuing unprecedented 4G growth throughout 2014 and into 2015. The trend for laptop ownership to shrink and tablet ownership to rise remains, although there are an increasing number of devices on the market that blur the lines somewhat, such as the Microsoft Surface.

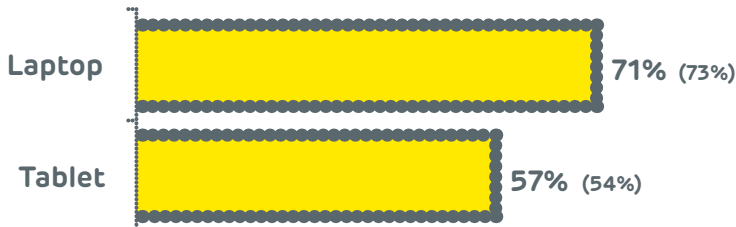
Since the last report, the 4G usership has ticked slightly older; this is in part due to the continued expansion of EE 4G coverage to more rural regions where the average age is older – EE now covers 88% of the population with 4G.

EE 4G customer base



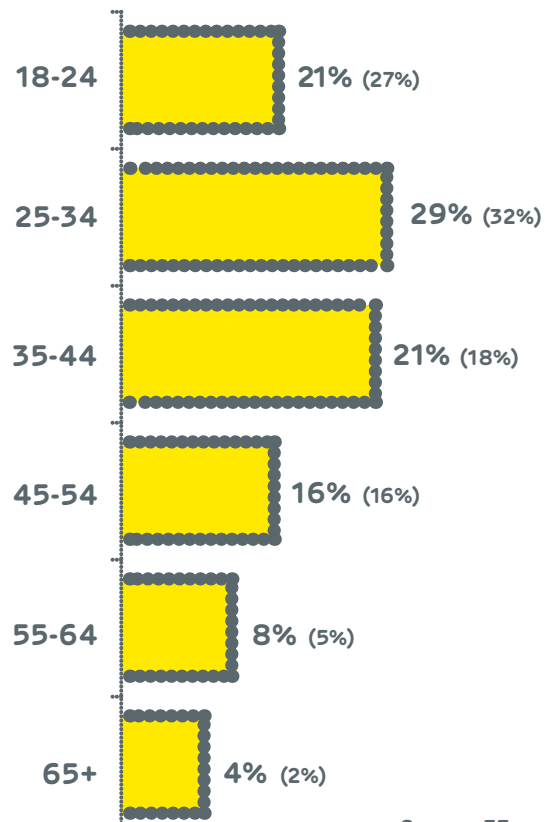
Source: EE

Other personal devices owned



Source: TNS

Age



Source: EE

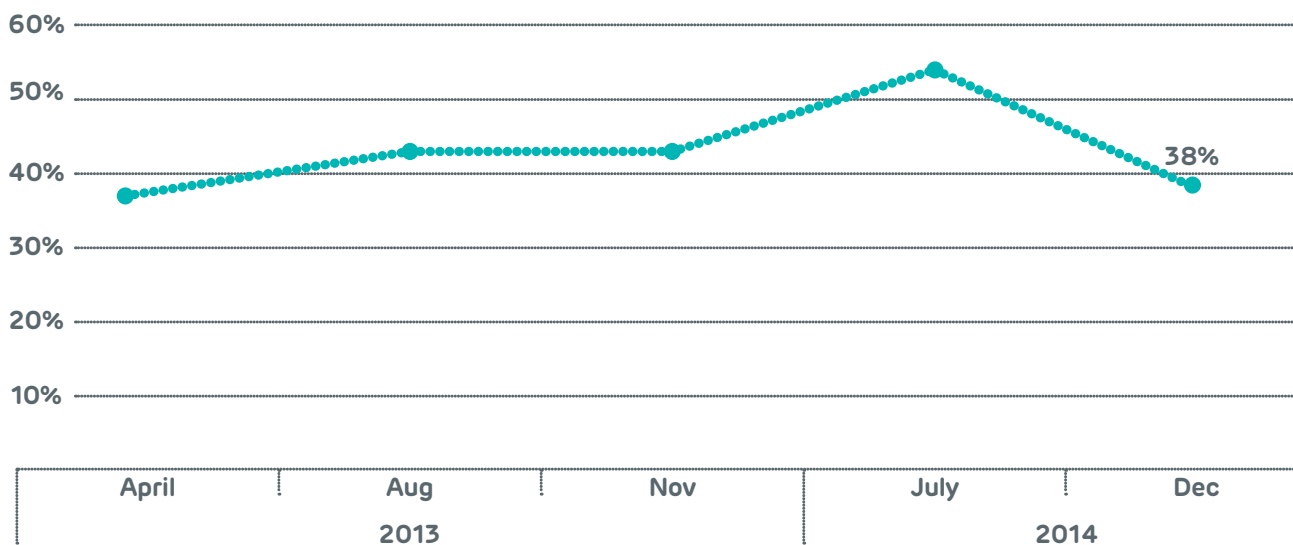
Bracketed figures from August EE Mobile Living Index

RISE IN WIFI AND HOME BROADBAND USE

For the first time, the number of customers that are using fewer or no WiFi hotspots and less home broadband has taken a slight dip. This year, EE launched WiFi calling, enabling customers to take calls over their

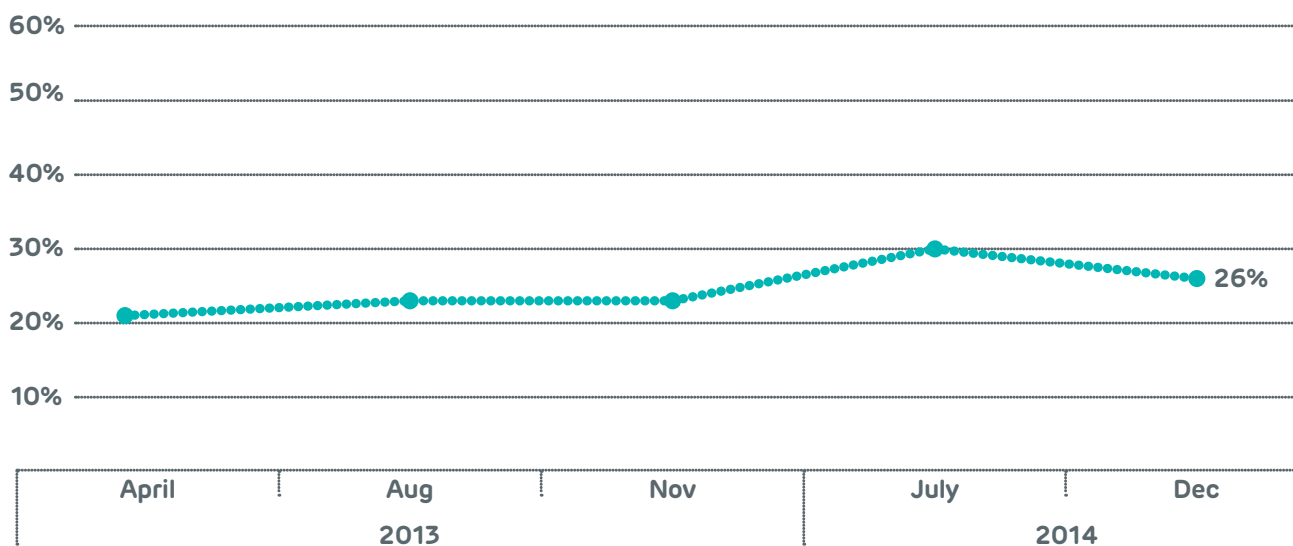
WiFi network and extending the number of places that our customers want to use WiFi. 10 million WiFi calls were made within one week of the service launching.

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



Source: TNS

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



Source: TNS

4G USER BEHAVIOUR

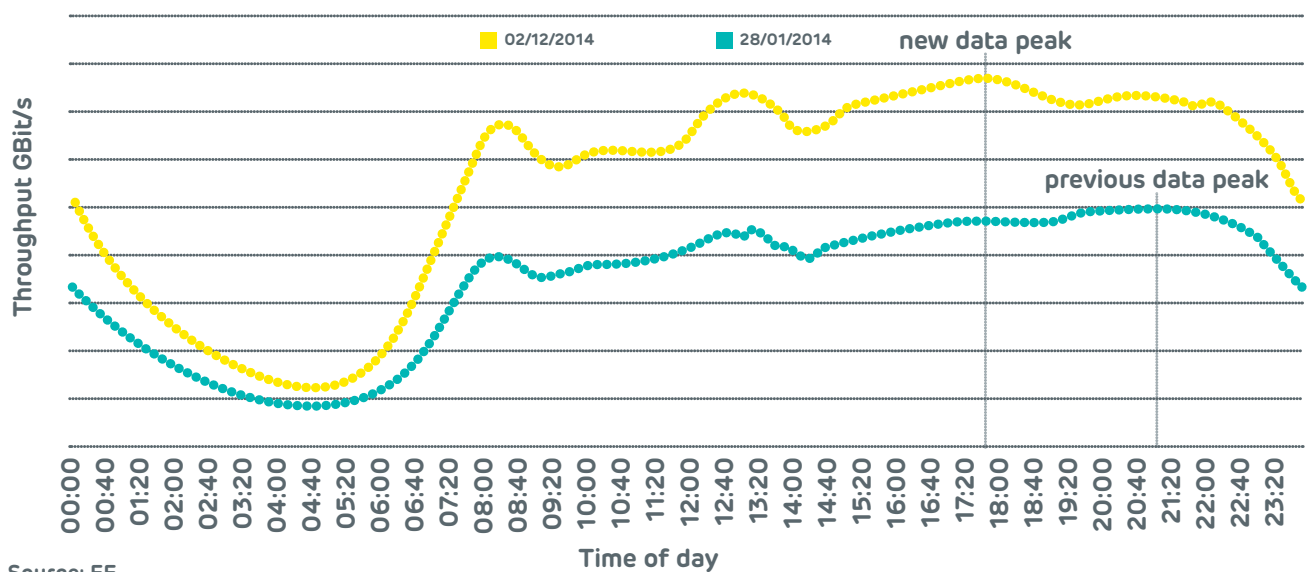
WIDER 4G COVERAGE IS SHIFTING USAGE PATTERNS

4G is fundamentally changing the way people use their mobile phones. The promise of mobile internet was never fully realised with 3G, but 4G is giving customers the opportunity to stream, share, and perform a host of data-heavy activities on the go. Within the last year, as around 7 million 4G users joined the EE network, there has been a shift in peak usage times from late in the evening to during the commute, when previously dead

time can now be filled with a range of activities.

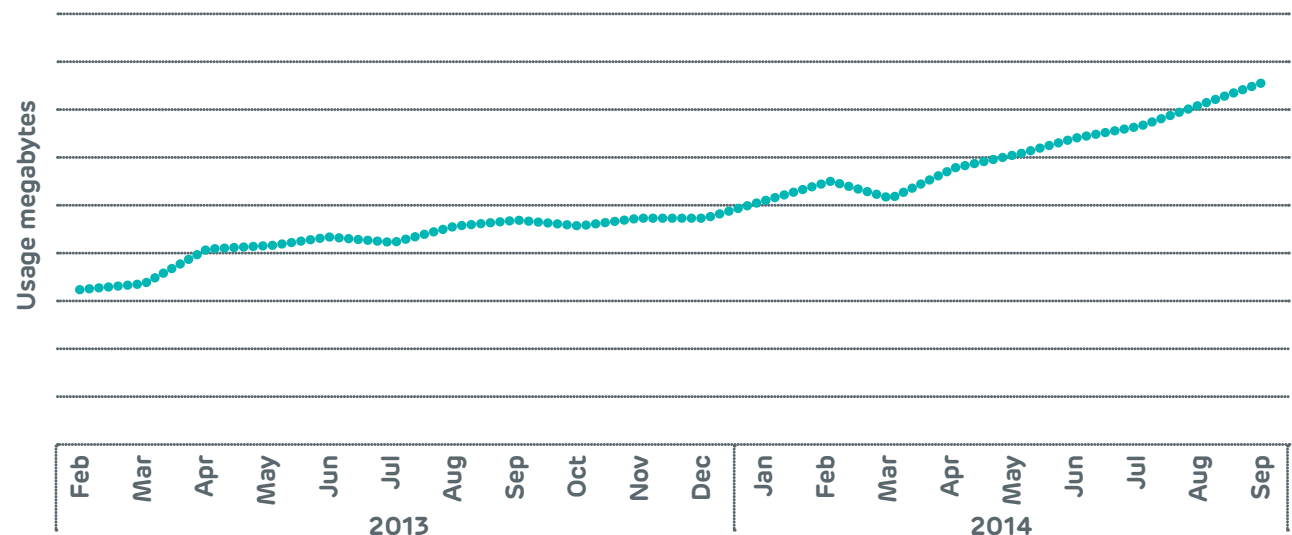
Separately, 4G users are also rapidly increasing data usage overall, at a rate of 3-5% a month. Over the course of a contract this means that most customers require double the data limit at the time of renewal. This particular trend is showing no sign of slowing down.

When are people using 4G?



Source: EE

Average usage, per user, per month



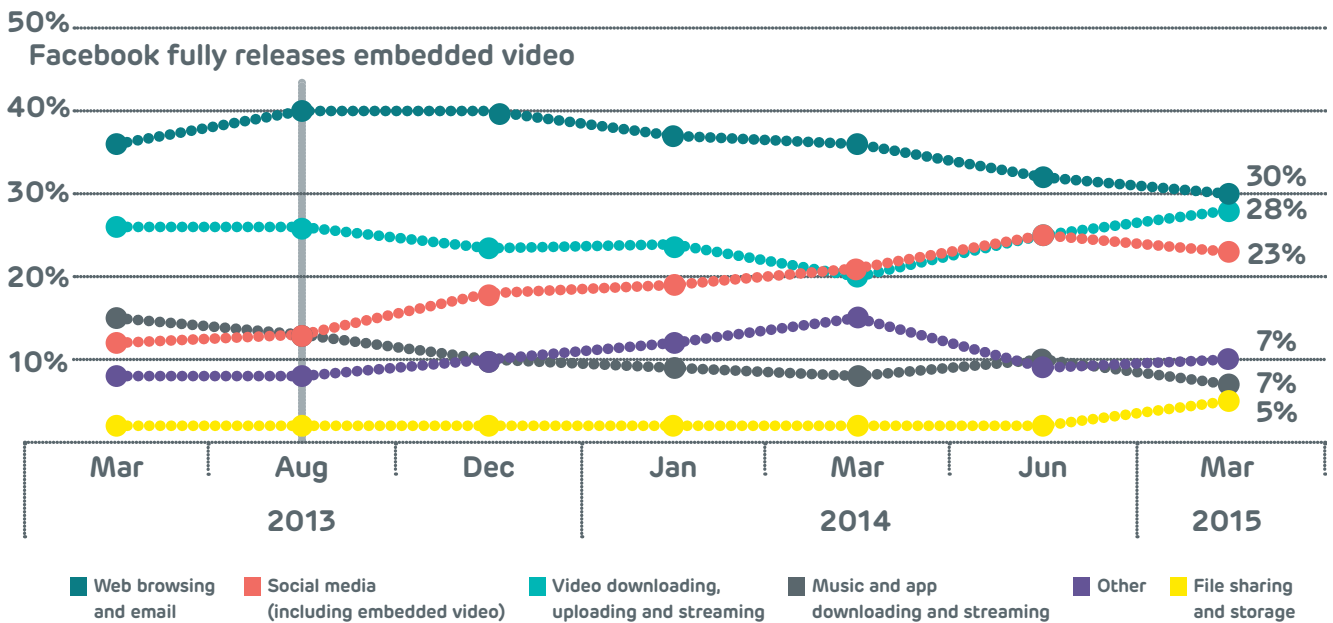
Source: EE

4G vs 3G: STREAMING AND SHARING STILL DOMINATES

For this year's EE Mobile Living Index we have recategorised some apps, which has meant small percentage changes in the various segments of network activity. Irrespective of this, file sharing in particular does appear to be on the rise. Google Drive is now one of the top ten heaviest apps in

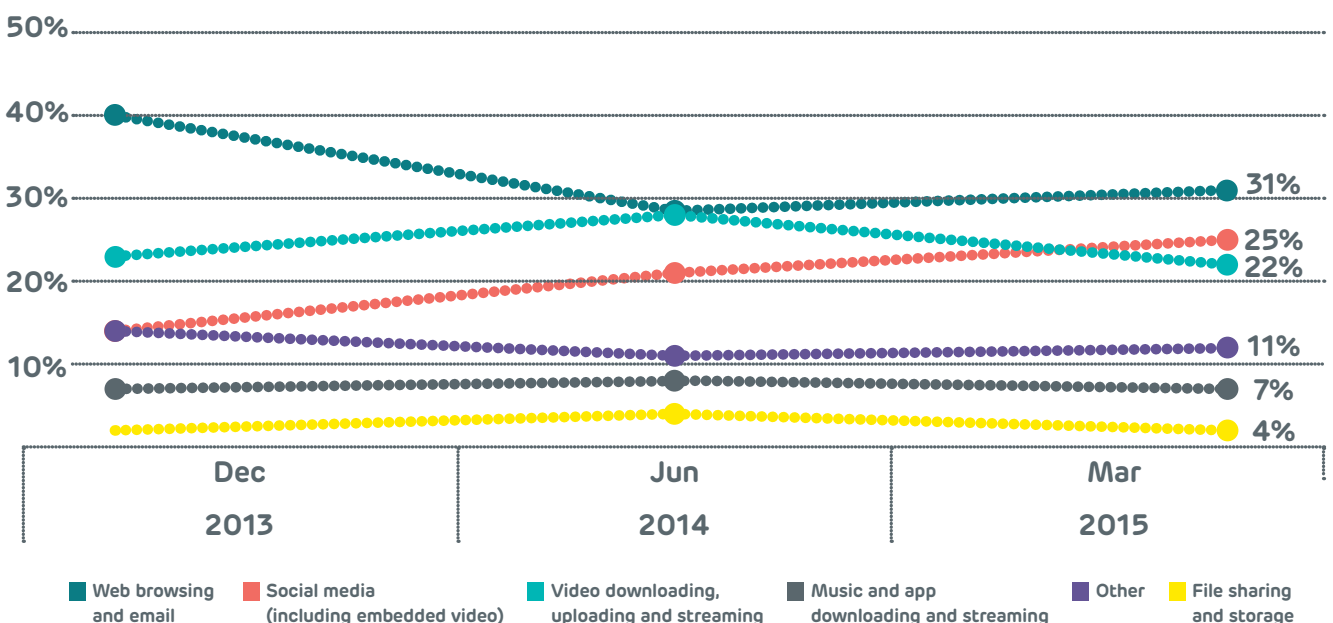
terms of data traffic over the 4G network. YouTube and Facebook remain the most popular apps on both the 4G and 3G networks; the effect of introducing embedded video on the latter can clearly be seen on the graphs below.

What are people doing with 4G?



Source: EE

What are people doing with 3G?



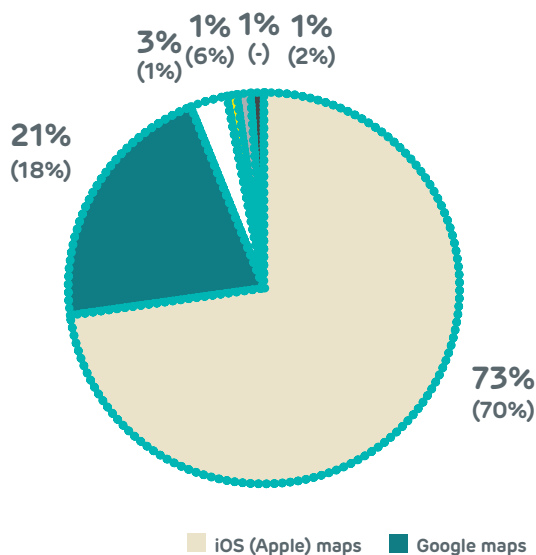
Source: EE

APPLE MAPS GROWS, PLAYSTATION CONTROLS MOBILE GAMING

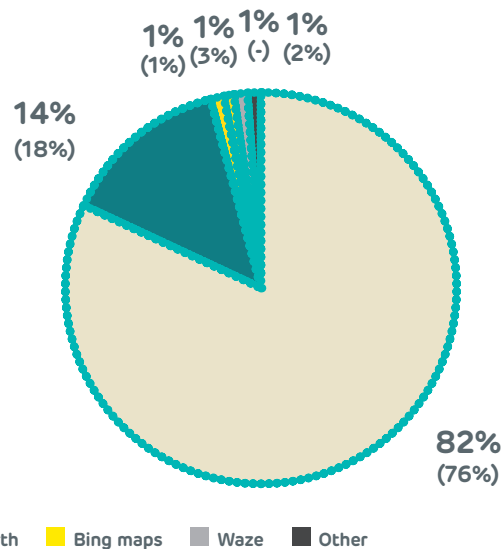
After a few tweaks to the launch version, Apple Maps now takes the lion's share of data use on both EE's 4G and 3G services. Unsurprisingly, due to the larger data requirement, Google Earth is more popular over 4G. Steam, which serves not only as a digital distribution

platform, but also as a gamer's social networking site, is more popular over 4G where the increased bandwidth allows simultaneous downloading and updating of games at the same time as interaction with other gamers.

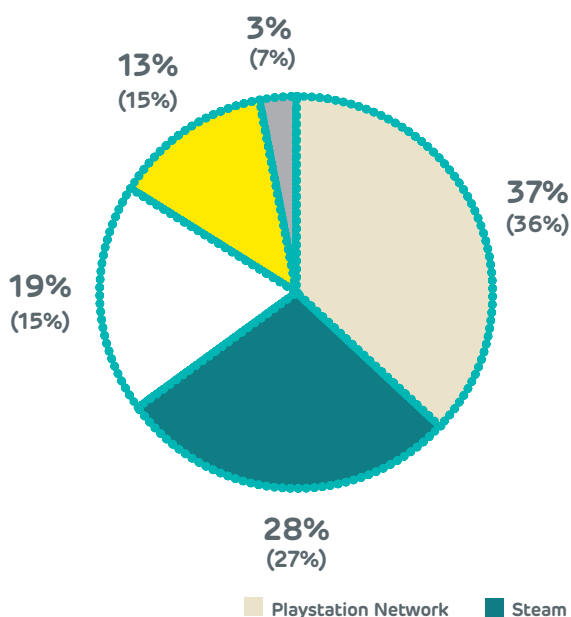
4G Mapping



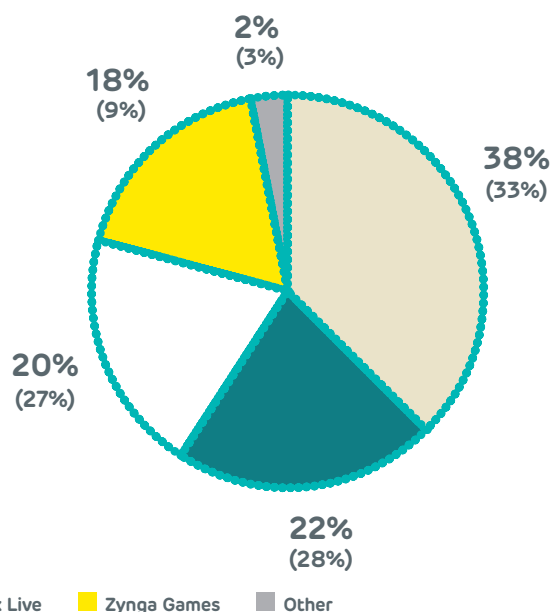
3G Mapping



4G Gaming



3G Gaming



Bracketed figures from August Mobile Living Index

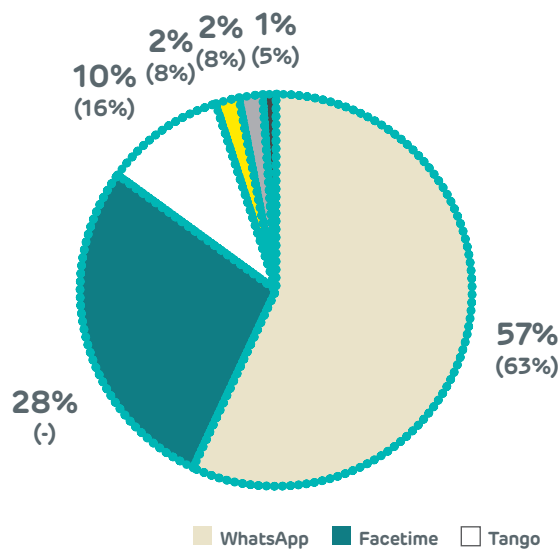
Source: EE

WHATSAPP MOST POPULAR COMMUNICATION SERVICE

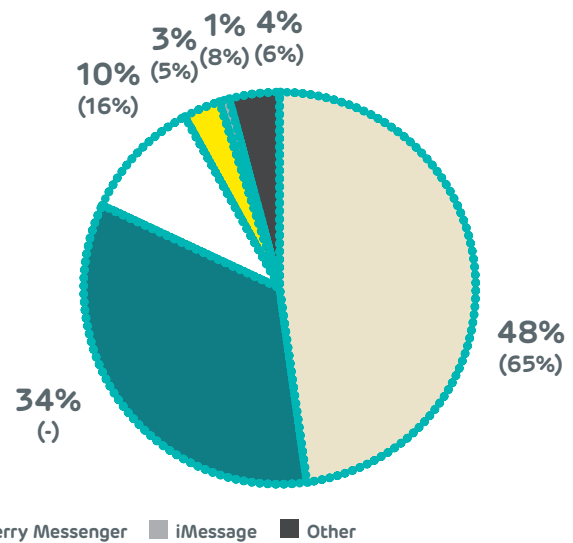
Facetime has, for the first time, been captured in 'communication and messaging', highlighting that it's an incredibly popular service over both 4G and 3G. Notably, in the audio area, social media music streaming service

SoundCloud is beginning to complete dominate. By the end of 2015 it could comprise more than half of all audio traffic over 4G.

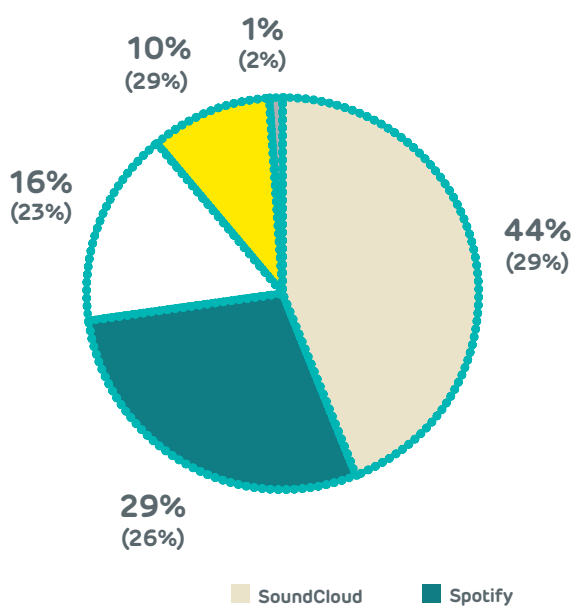
4G messaging



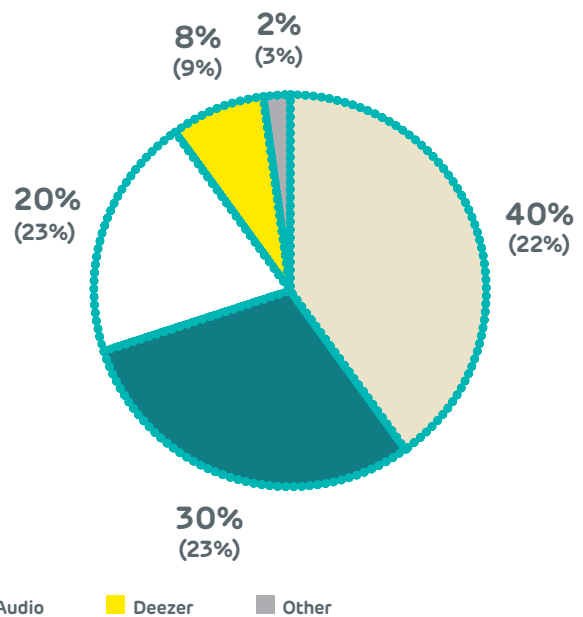
3G messaging



4G Audio



3G Audio



Bracketed figures from August Mobile Living Index

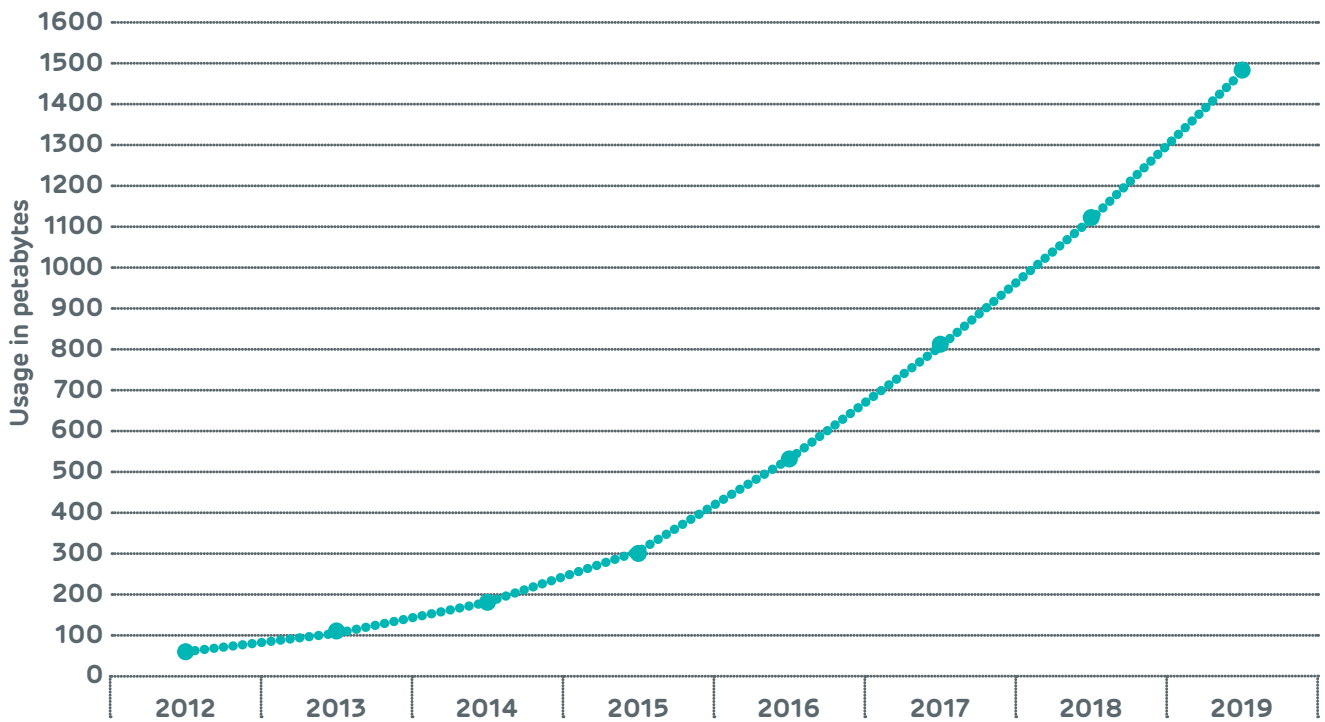
Source: EE

EE TO DELIVER ONE EXABYTE OF DATA THROUGH 2018

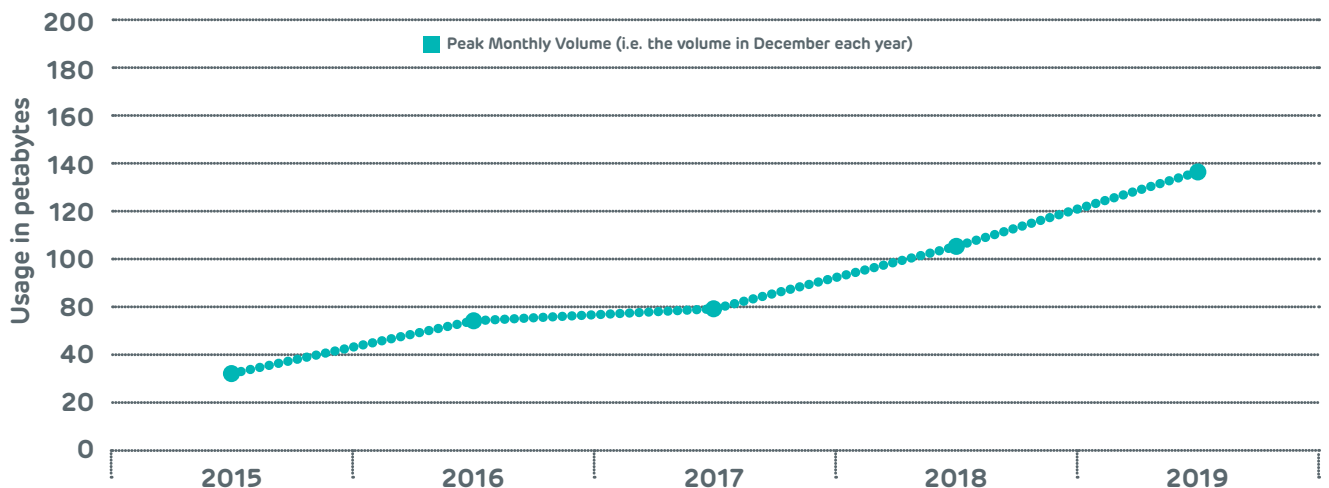
1,000,000,000,000,000 bytes of data is an exabyte, and five of them would be enough to store all of the words ever uttered by human beings. By 2018, such is the enormous growth in data, driven primarily

by the explosion of video, especially high definition, EE will carry more than one exabyte of data across its network, equating to more than 42 million Blu-ray disks of information.

Total yearly data over the EE network



Volume of EE data in December each year



Source: EE

4G ON THE MOVE

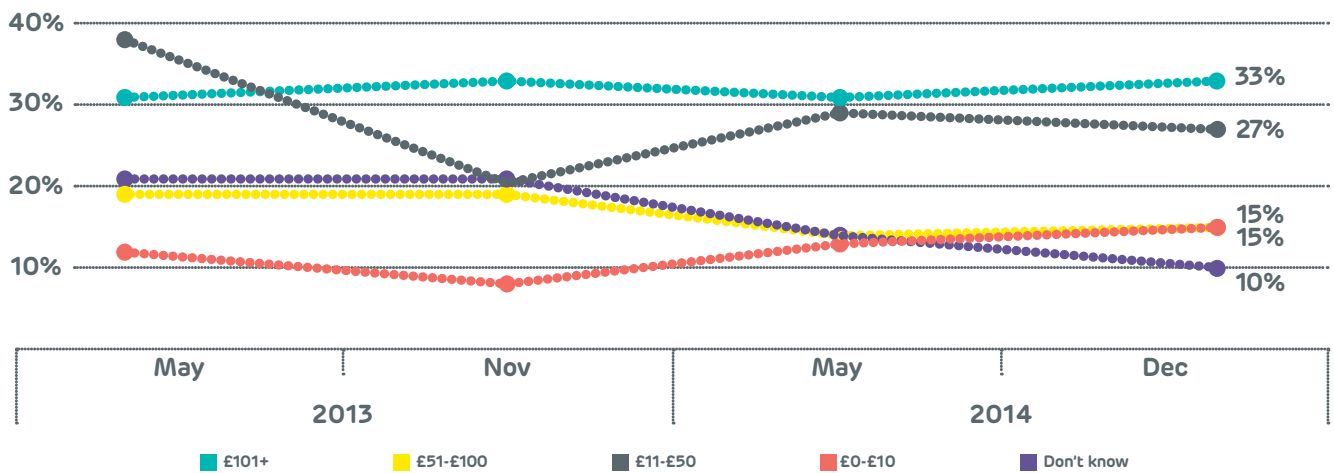
A THIRD OF SHOPPERS SPEND MORE THAN £100 ON MOBILE EVERY MONTH

The average 4G customer now spends £89 a month on their mobile shopping online, with Amazon still the most popular retailer. Since the start of the EE Mobile Living Index surveys, the number of people that 'don't know'

how much they are spending online has steadily fallen as customers become more cognisant of the mobile device taking a significant portion of the monthly shopping budget.

SHOPPING ON THE GO

Amount spent over the past month shopping online using 4G



4G

The average 4G user spends **£89** a month on their mobile shopping online

4G

28% shop more on mobile with 4G (no change)

78% of shoppers used either eBay or Amazon at some point during the month

71% use their mobile for shopping (up 1%)

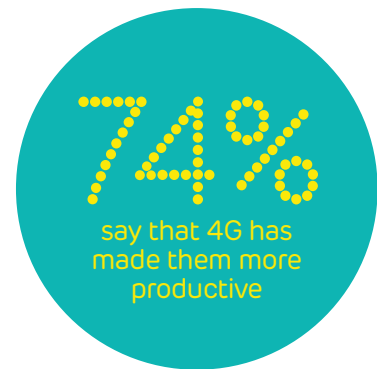
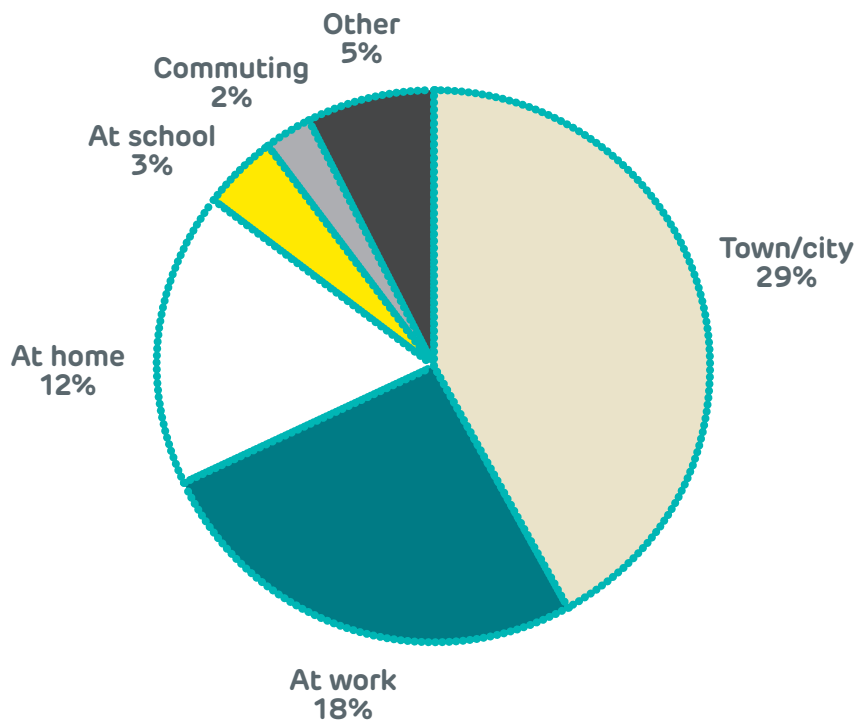
Source: TNS

4G ALLOWS WORK IN MORE PLACES, MORE OF THE TIME

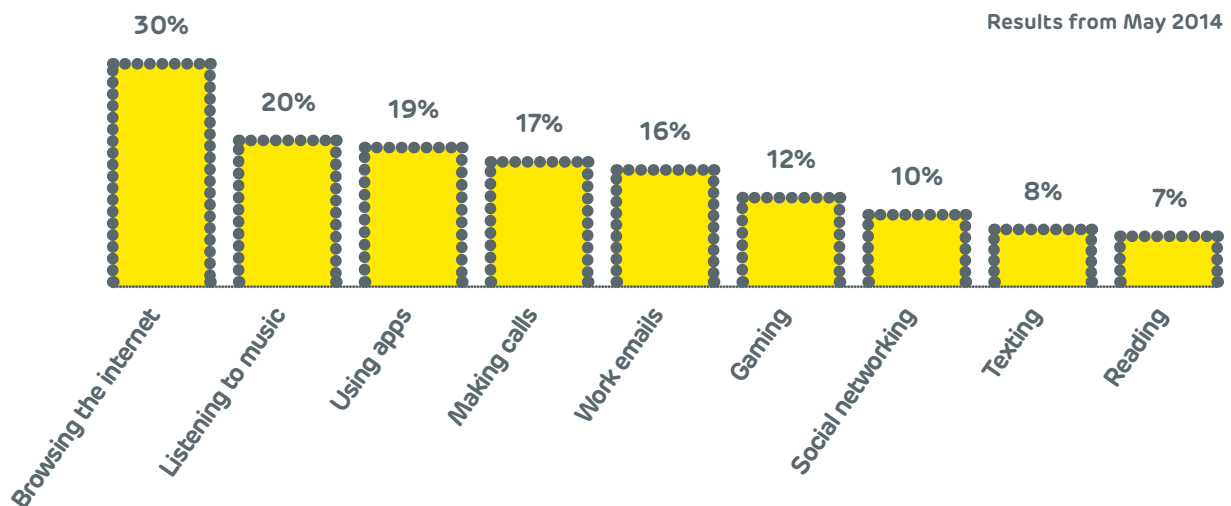
Though 4G now extends to 88% of the population, the majority of the UK population lives in towns or cities, so it's no surprise that the greatest uplift in areas where customers use their device for work that they couldn't before is within these urban areas. 3% of customers

are using their devices at school, highlighting the fundamental part mobile infrastructure now plays in people's daily lives. Browsing the internet is the most popular commuting activity.

Which locations do you use your device for work that you couldn't before 4G?



Phone use when commuting



Source: TNS

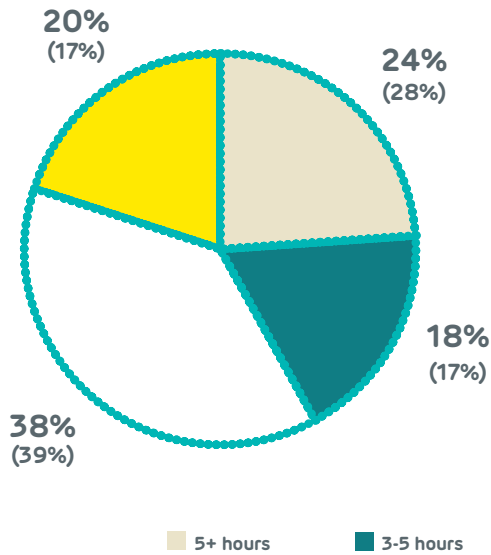
NETWORK USAGE

17% SPEND MORE THAN THREE HOURS A DAY ON THE MOBILE INTERNET

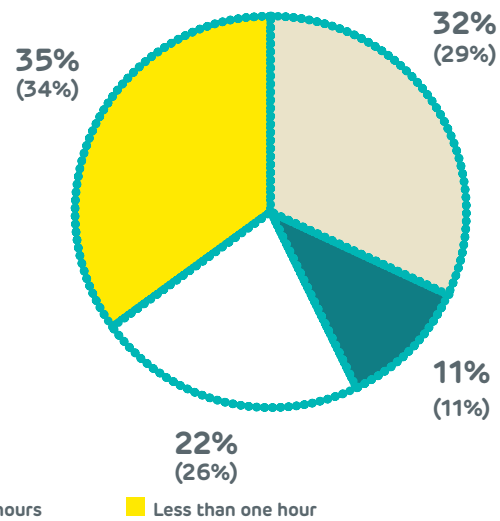
Access to the internet continues to be evenly shared everywhere apart from public WiFi, where sessions are significantly shorter than home broadband, work broadband or the mobile internet.

Time spent accessing the internet

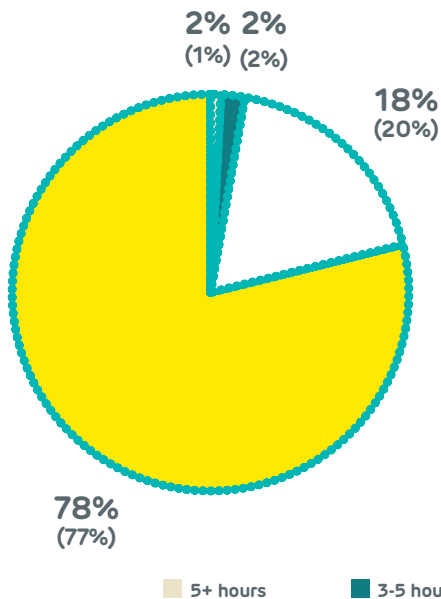
Mobile network



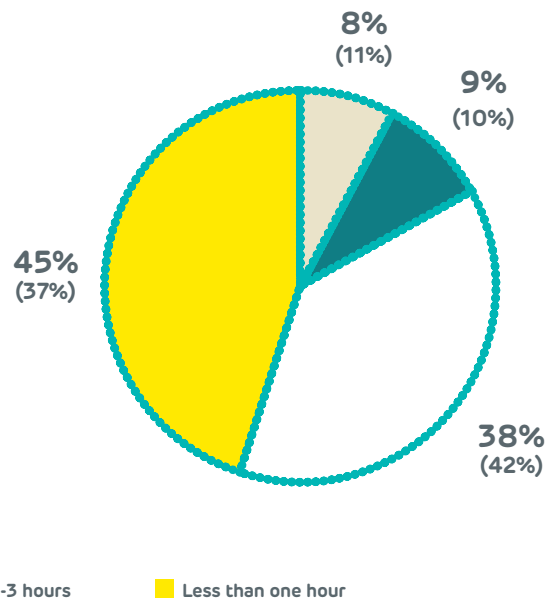
Work broadband



Public WiFi



Home broadband



Bracketed figures from August Mobile Living Index

Source: TNS

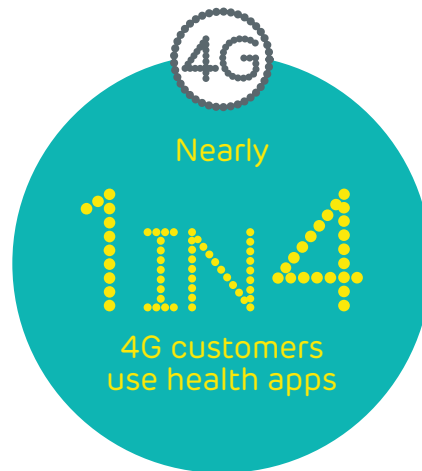
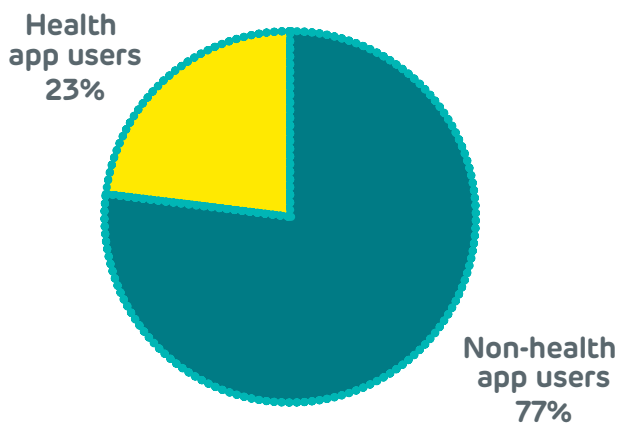
HEALTH & FITNESS

A QUARTER OF ALL 4G USERS ALREADY USE HEALTH APPS

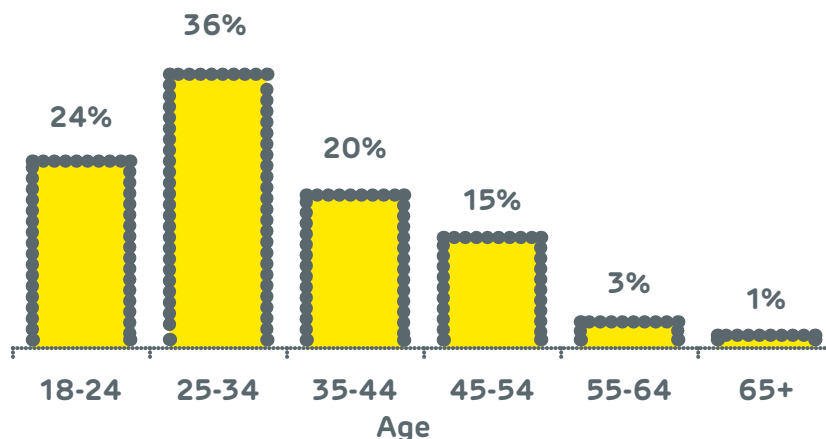
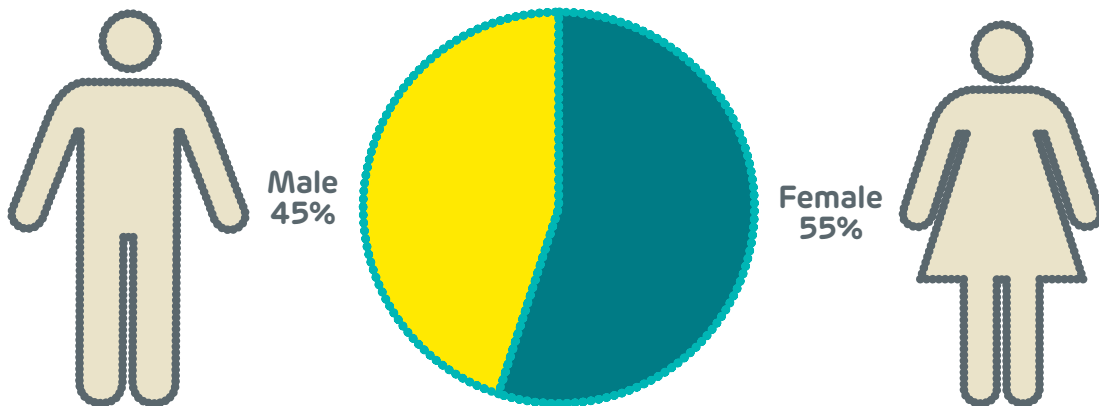
With an increasing number of apps using GPS positioning, heart rate monitors, and even the smartphone's ability to tell how many steps you've taken in a single day, in this EE Mobile Living Index we've taken a specific look at the rise of health apps and how the 4G network is enabling people to track their health and exercise more accurately. It is female

customers that are leading the way, comprising 55% of health app users. With more income than the younger segment, and perhaps more likely to be active than the older ones, 25-34 year olds are most likely to use apps such as Apple's embedded Health app, and tracking apps such as Strava.

Health app users



What do health app users look like?



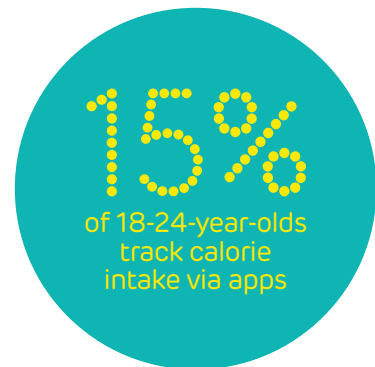
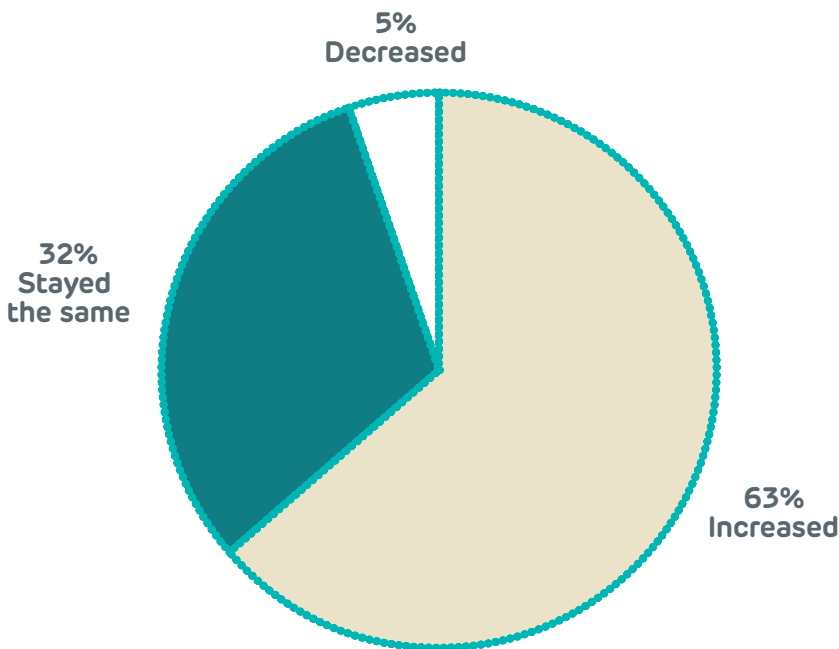
Source: TNS

HEALTH APPS THAT TRACK EXERCISE AND CALORIES ARE THE MOST POPULAR

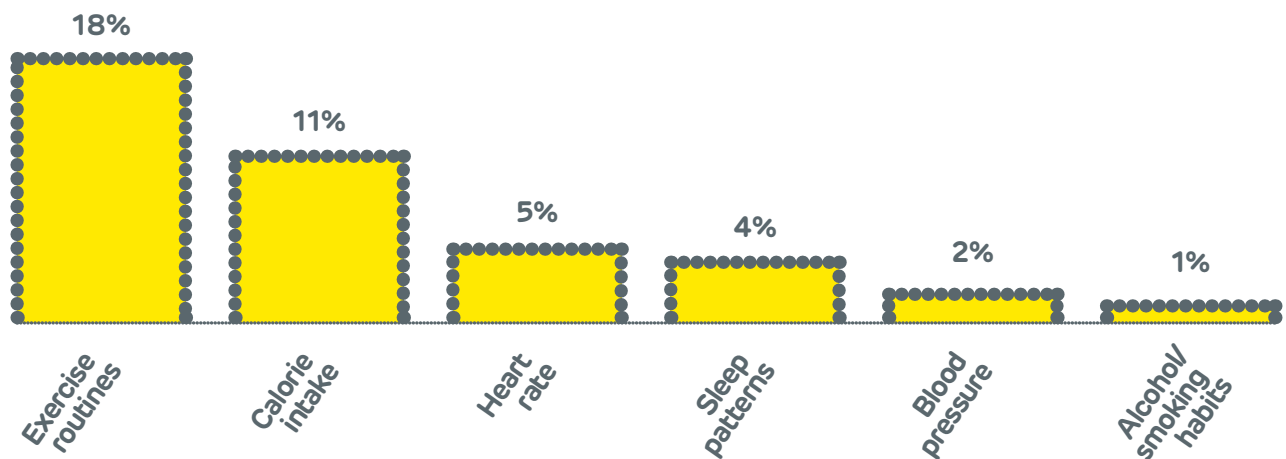
Nearly a fifth of all health apps track the effects and progress of exercise, including GPS-based services such as running apps. 2% of health app users track their blood pressure, signing the beginning of app usage to monitor genuine health problems as well as simply calories burned and consumed.

Having access to a superfast 4G network increases health app usage by 63% with customers better able to constantly update often data-heavy apps without buffering.

How has your health app usage changed since moving to 4G?



What do people use health apps to track?



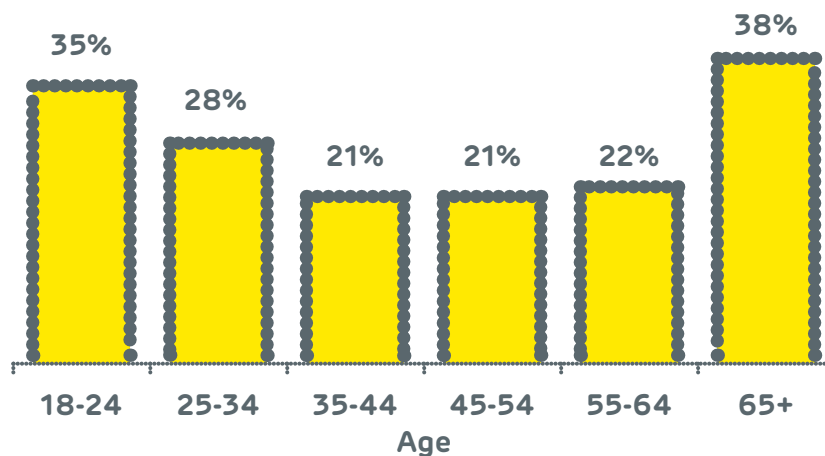
Source: TNS

ELECTRONIC PRESCRIPTIONS AND VIDEO CONSULTATIONS: IN A 4G WORLD USERS WANT HEALTH ON THE GO

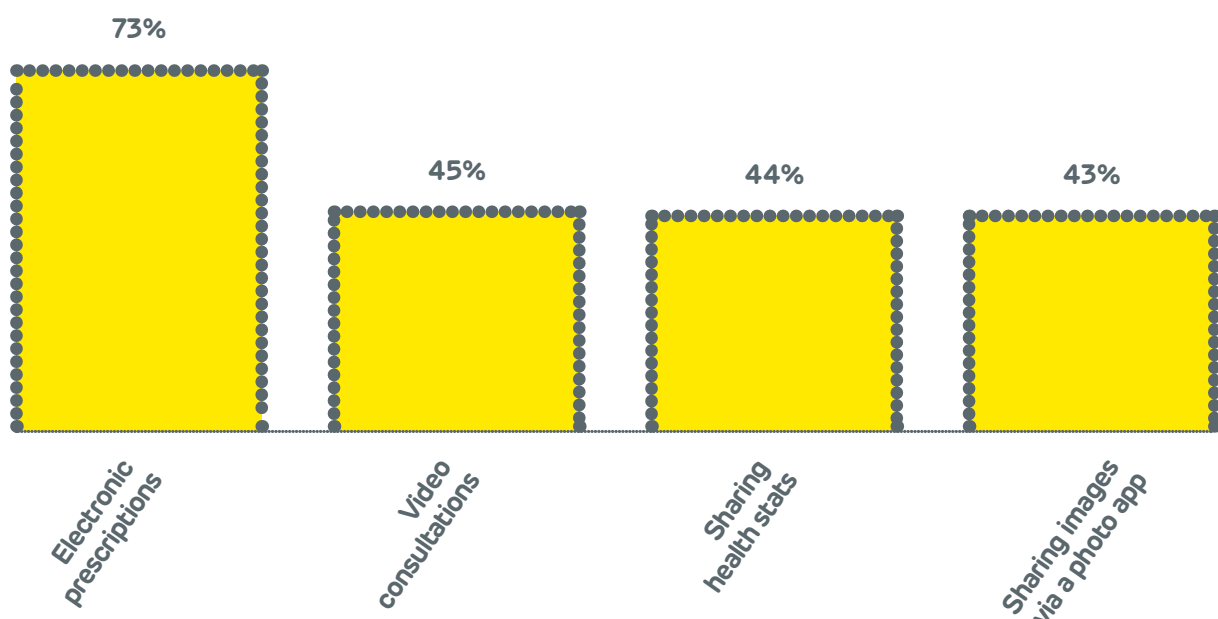
Two-thirds of 4G customers would like to use the network to facilitate online prescriptions, and nearly half would be happy to use video GP consultations. Increased connectivity and superfast mobile networks have long been mooted as a way of helping solve some

of the strain placed on the NHS and now it seems consumers are happy to see that realised. At the older and younger end of the 4G user scale, it is Government endorsement that would drive health app usage.

Those who agree Government endorsement would increase their likelihood to use health apps



GP apps people would like to see



Source: TNS