

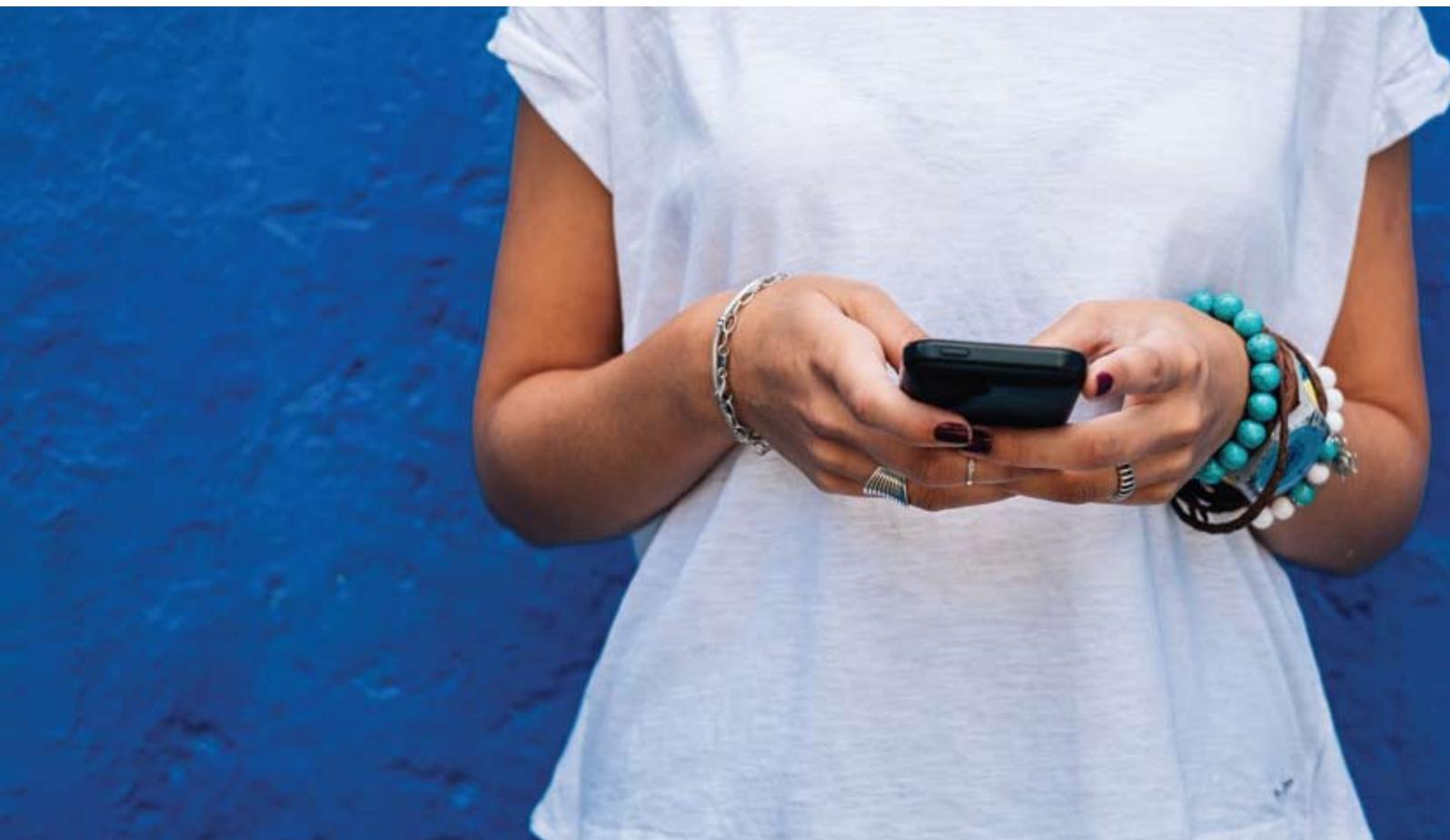


The O₂ future of mobile life report

more for you O₂

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The 21st century art of embracing mobile technology

There are now more mobile connections in Britain than people. According to Ofcom there were 92 million connections at the end of 2016, compared to the population of around 65m.

Mobile means convenience is aspirational and within reach – for we can now receive supermarket deliveries to our door and buy gifts wherever and whenever. It means our entertainment has been revolutionised, as mobile gives us greater choice and flexibility, and we can interact with television and curate our own content to suit our tastes. And it also extends our ability to explore new ways of learning and improve education.

And on perhaps a more human level, mobile also moves people: it stirs emotion, passion, generosity and creativity.

It means we can build relationships with people 10,000 miles away, be present at home when we're absent, and meet those we wouldn't have otherwise. It's a medium to establish trust and share values¹.

And mobile can stir a movement, drive collective creative thinking and inspire us to act – particularly via social media.

But that's not to say we're always necessarily comfortable with mobile technology. Sometimes our over-reliance on the remote controls to our lives can cause concern: what if I leave my phone on the bus and lose all my contacts and data? What if I send a personal message to the wrong person? What happens if I run out of battery before I finish reading this sentence?

50% feel social anxiety when they have low phone battery

23% feel anxious about battery level at least once a day

40% charge their phone more than once a day

This is the first O₂ Future of Mobile Life report – following the two previous O₂ Mobile Life reports – commissioned to explore how developments in mobile technology have affected everyday life in 2017 and how they may continue to affect O₂ customers in the next decade and beyond.

¹ The Economist Intelligence Unit

Introduction (continued)

It looks at the things that concern us about our mobile lives, including the newly-identified trend of FoRo, or Fear of Running Out of battery power, an exciting glimpse into the future, predicting what will replace them via tech-enabling the human body, as well as looking at the everyday parts of our lives that technology is set to make obsolete over the next decade.

70% think advances in mobile tech will make life easier

65% feel negatively towards advancements in mobile tech

The report is compiled by O₂ with input from Dr Ian Pearson, a leading futurologist and keynote speaker who has delivered globally over 1,000 provocative talks about the future of many aspects of our daily lives – from work to leisure, and from fashion to climate change. Recognised as the first person to predict the arrival of the text message, he has over 1,800 inventions to his credit, as well as seven books and over 700 TV and radio appearances.

The report is also augmented with nationwide research involving a representative sample of 2,000 UK adults, who were surveyed in September 2017 by OnePoll.

About Telefonica UK/O₂

Telefónica UK Limited is a leading digital communications company owned by Telefónica S.A. O₂ is the commercial brand of Telefónica UK Limited and is the mobile network operator with the highest customer satisfaction in the UK according to Ofcom and The Institute of Customer Service. With over 25 million customers, O₂ runs 2G, 3G and 4G networks across the UK, as well as operating its nationwide O₂ Wifi service.

O₂ has over 450 retail stores and sponsors The O₂, O₂ Academy venues and England Rugby. Read more about O₂ at O2.co.uk/news.

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Chapter 1

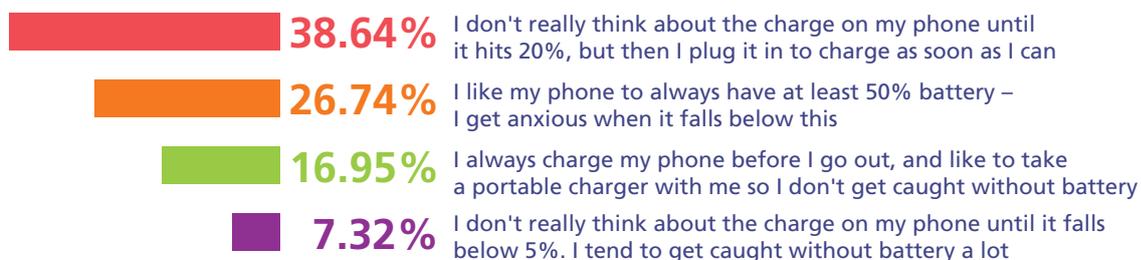
Don't panic

Why Fear of Running Out is the UK's new mobile phone fear – and what else concerns us in our mobile world

It's the little things that mean a lot. Things like that little number in the top corner of your phone screen, which seems to be forever counting down, as the very life in your precious mobile ebbs away from your phone battery. Your connection to the rest of the world becomes reliant on the presence of a plug and phone charger.

Ok, maybe that's a bit over dramatic BUT according to research conducted for this report, battery panic is all too real for millions of us. In fact, **almost a quarter (23%) of Brits experience FoRo, or Fear of Running Out, on a daily basis**. Not only that, but the point we start to feel anxiety differs considerably across the nation, unveiling in turn the different tribes of battery charge consumers.

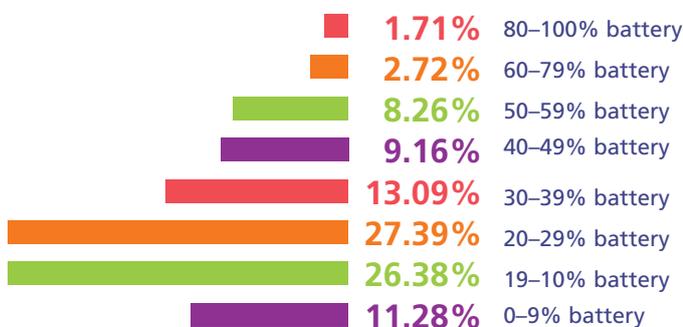
Q. Which of these statements apply to you?



This anxiety may be set to fade as frequently charging batteries will soon become a thing of the past, with technological advances take over.

However, the nation is currently in an almost constant state of FoRo, as a worried **50% of Brits feel anxiety when their phone charge is low**. And the **fear of being caught out with a dead battery (30%)** falls **just behind theft (35%)** in our top mobile worries.

Q. At what percent do you most start to feel a sense of panic about the level of battery charge on your phone?



Average battery level panic : 27.57%

Chapter 1 (continued)

As smart phones become an ever-more present part of society, and customers' demand for data increases, FoRo is only set to grow. Over two fifths (**43%**) of respondents admitted that their fears have increased over the last five years, whilst two fifths (**40%**) have taken actions into their own hands, carrying at least one portable charger as a backup.

The research also splits battery panic into different consumer categories:

24% of 18-24-year olds are always charging both their mobile and portable charger before heading out and almost never leave the house or office without a full battery

The Just-in-Timers: As soon as the phone battery icon turns red, anxiety sets in for this tribe which accounts for almost two in five (**39%**). However, it's not all doom and gloom for this lot as they still have fair warning before completely running out.

The Worriers: These constant worriers never want to be caught out, putting their phone on charge before it even reaches the 50% mark. This constant state of FoRo impacts over a quarter (**27%**) of the population.

The Planners: Representing **17%** of Brits (and 24% of 18-24-year olds), this group are always charging both their mobile and portable charger before heading out and almost never leave the house or office without a full battery (and a power pack to hand).

The Last Minuters: The smallest proportion (at just **7%**) wait until the last moment. They may not constantly worry, but are filled with blind panic and commonly caught when they need their phone the most.

Q. What about your mobile phone worries you on a daily basis?



But don't worry about FoRo too much – these tribes will eventually become a distant memory. Dr Pearson predicts that frequently charging batteries will soon become a thing of the past, with the HUMAN BODY and solar powered clothes set to be the main source of our mobile technology power supply.

50% of Brits feel anxiety when their phone charge is low, and the fear of being caught out with a dead battery (30%) falls just behind theft (35%) in our top mobile worries



Chapter 1 (continued)

As wearable tech becomes more common and more efficient with most processing moving to the cloud, technology in general will require less energy to power. We will be able to charge our devices through solar powered coatings on our clothing and even via body heat or movements – meaning that we'll only need to plug our wearable tech in once a week at most.

The few of us who still want to run loads of items at once might need to carry some fuel cells in a handbag or coat pocket, however this will only be for very extreme use patterns, and definitely won't be the norm.

Dr Pearson said:

"There's clearly anxiety around battery power, but the future holds scope to banish this forever. We'll charge our devices at all times – meaning no more having to check the battery level, or search for a plug socket or portable charger.

"With superfast ubiquitous networks, massive processing capability, and effectively infinite display area via augmented reality, there will certainly be plenty of lifestyle enhancement to use this extra capability."

"The fear of running out of battery on your mobile phone is one that many of our customers at O₂ can relate to. Every day we rely on our mobiles for a whole wide range of reasons, whether it's for directions, capturing memories, or a simple call or text.

We've commissioned the O₂ future of mobile life report to understand the world our customers will be living in over the next decade, and how we as O₂ can support in that journey."

Nina Bibby
Chief Marketing Officer, O₂ UK

Who needs a mobile device when you can have a mobile tech-enabled body?

I've got you under my skin, as Frank Sinatra once sang. He was talking about emotions – but what if it applied to physical technology? And what if that technology meant we no longer needed mobile phones?

One of the key outcomes of the digital revolution over the first two decades of the 21st century has been convergence – there was a time, for instance, when phones, TVs, wrist watches and music players all did their own separate jobs. But in 2017, no-one considers it unusual that they all do pretty much the same things as each other. And according to Dr Pearson, advances in embeddable and wearable technology has the potential for the human body to replace smartphones by 2049 – that's only 32 years from now.

When you consider that 32 years ago it was the mid-80s, and take a moment to think about the awe-inspiring technology changes we've witnessed since then, it doesn't feel far-fetched in the slightest.

Sensors embedded in the skin and augmented reality (AR) visors worn at all times will provide the wearable technology to make humans a walking version of everything the handheld device is to us in 2017

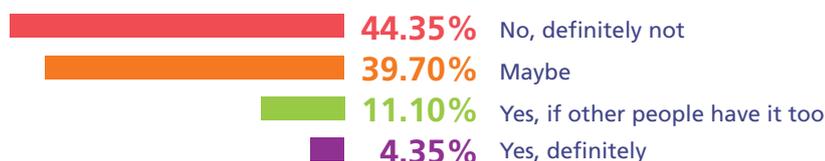
Sensors embedded in the skin and augmented reality (AR) visors worn at all times will provide the wearable technology to make humans a walking version of everything the handheld device is to us in 2017.

In fact, mobile technology in and on the human body will shape the way we interact with each other in the decades to come.

Dr Pearson predicts a mixture of embedded sensors, tiny capsules inside the skin close to nerves and wearable technology – such as visors or contact lenses – will completely change interactions between friends, colleagues and even business. And the good news is that a majority of UK consumers would feel comfortable in their newly tech-enabled bodies.

Two-thirds (66%) believe advances in technology will make life easier, with just over a quarter (26%) excited about these changes. And perhaps surprisingly, **56% of the population are excited about augmenting and adapting our bodies** – revealing that they would be happy to consider implants for practical purposes such as monitoring health (41%) and unlocking doors (23%) rather than for sharing of feelings (10%).

Q. Would you be willing to augment or adapt your body with technology in the future?



Wearable and embedded technology is set to completely break down the walls in distance that we currently experience when trying to keep in touch with friends and family from afar – revolutionising how we keep in touch.

Chapter 2 (continued)

By 2049, AR meet-ups will be commonplace, with additional developments in technology creating the feeling of being in the same room without physically moving.

Shared senses – tiny capsules inside the skin close to nerves – will allow us to feel the physical interactions with one another. From a hand shake, hug or kiss on greeting, to the feeling of sitting in the same furniture, these developments will create the sensation of physical closeness, reducing the gap between people that we currently feel when interacting over the phone or computer.

Smart glasses and visors are becoming more common today, but in the next thirty years these forms of wearable technology are only set to grow

Smart glasses and visors are becoming more common today, but in the next thirty years these forms of wearable technology are only set to grow. By 2049 it's likely that everyone will wear AR visors on an almost permanent basis, which will completely change the way we interact with the world around us.

Simple activities like walking down the street will be transformed as AR overlays on our visors of the future will share common interests with passers-by, showing information such as their favourite TV show or their top music choice.

Q. Which of the below would you like to see in the future and which would you hate to see?

	Like (%)
Mind-controlled technology	20.50
Realistic virtual reality holiday previews	38.80
Optical implants to zoom in and see in the dark	23.05
Implants under our skin that measure health and fitness levels	25.65
Accurate 3D body scan so I can get clothes made to fit perfectly	37.20
VR mirrors for make-up or clothing preview	28.70
Foreign language translation	56.65
Technology that allows doctors to check you remotely	39.60

There has been a growing demand in health trackers in recent years, and this appetite is only set to increase. By 2049, sensors below the skin will monitor our health and fitness – telling us when to exercise and the best activities to achieve the best results.

In addition, it will also notify medical professionals if our health is at risk and even call 999 immediately in an emergency.

Chapter 2 (continued)

To bring this future to life, O₂ has collaborated with inventor Sean Miles and beauty brand Nails Inc to create the first-ever mobile nails; beautifully designed false nails and accompanying jewellery that have technology embedded within, creating a removable “handset” that you can talk into by raising your finger to your face.

“The way our customers interact with one another will change drastically in the next thirty years and as a brand we want to adapt to this. We are always looking ahead to the next developments in mobile and to be able to bridge the gap between fashion and tech is a really exciting challenge. People have been customising phones for years but this is the next step towards tech and the human body working together to connect our customers in a totally new way.”

Nina Bibby
Chief Marketing Officer, O₂ UK

Going, going, gone

The things that technology will make obsolete – and what we REALLY hope will disappear over the next decade

Here today, gone tomorrow. Well, next week possibly, and certainly by the end of next month. And if the pace of life and the way things come and go in 2017 feels like it's quicker than ever before, the speed at which our technological and mobile worlds are constantly changing feels like a blur.

But as mobile technology seemingly develops at such high speed, what everyday elements in our lives are likely to disappear over the next 10 years? And what things do consumers hope this will include?

Cash machines, passwords and the landline telephone are all things Brits can't wait to see the back of – with the research revealing that **60% of the population feel that advances in technology have completely changed the way we live.**

34% of Brits are happy at the prospect of never having to type a password again, while 30% look forward to the demise of the landline phone

Over a third (**34%**) of Brits are happy at the prospect of never having to type a password again, while **30%** look forward to the demise of the landline phone – and even **29%** say that the loss of cash machines from the high street would be welcomed.

And a move to a more paperless society is also high on our wish list with around a third of respondents hoping to see the back of a myriad of items including instruction leaflets (**35%**), phone directories (**35%**), paper tickets (**33%**), physical driving licenses (**31%**) and even passports and visas (**31%**).

Q. Which of the following would you like to see disappear in the next 10 years and which would you HATE to see disappear?

	Like (%)	Hate (%)
Phone calls via telephone	25.40	41.70
Passwords that you type	34.00	32.25
Paying with physical money	29.30	45.30
Wallet/purse that you carry around with you	29.55	43.65
Physical train or cinema tickets	32.50	33.70
Paper tickets	32.60	34.50
ATMs that dispense money	28.70	46.55
Landline phones	29.55	41.40
Physical passports and visas	30.65	38.60
Physical work security passes	27.60	27.00
SIM cards and memory cards	28.90	29.15
Human personal trainers	27.20	27.95
Typing	25.75	38.30
Written text messages	26.20	42.10
Cords and chargers	38.75	27.55



Phone numbers are set to disappear, for in the future all we'll need to do is say a name and voice recognition will connect us

Chapter 3 (continued)

	Like (%)	Hate (%)
Individual remote controls	35.30	28.20
Desktop computers	27.75	38.45
Numerical phone numbers	23.75	36.20
Keys for car and house that you have to carry with you	28.40	39.40
Pens and pencils	26.35	49.25
Emoticons	33.60	26.75
Human estate agents	26.75	33.55
TVs	28.30	49.65

And the expert view? Dr Ian Pearson predicts that the mobile phone as we know it will change dramatically – instead of carrying a device, we'll be able to access everything from a wearable visor, allowing us to project a favourite photo or video, for friends alike to see.

Phone numbers too are set to disappear, for in the future all we'll need to do is say a name and voice recognition will connect us. **Over a third (34%) of us are excited to see the back of passwords**, and we won't be disappointed as biometrics and device authentication are set to replace them in a few years. Likewise, the need for security passes or even keys will be redundant with security systems simply requiring a fingerprint or the iris of your eye.

Top 16 elements most likely to disappear over the next decade, according to Dr Pearson:

1. SIM cards
2. Keys and security passes
3. Personal trainers
4. Estate and travel agents
5. Phone numbers
6. Passwords
7. Wallets and purses
8. Cash machines
9. Torches
10. Televisions
11. Cords and chargers
12. Delivery people
13. Typing and text messages
14. Paper tickets
15. Driving licenses, MOT and insurance certificates
16. Emoticons

Chapter 3 (continued)

As AR and VR become more mainstream, it will make for a vastly more interesting viewing experience than looking at a flat screen – and all you'll need is a pair of special glasses or contact lenses.

And when we do need a more classic viewing experience, for the likes of work or surfing the web, we won't be looking at screens or typing with keyboards – instead projections and virtual tools will be the norm.

With advancements in charging technology, the plethora of cords and chargers around the house will be replaced by wireless charging. Voice control will also eliminate the need for remote controls, paper documents such as bills, passports and visas will be stored on embedded bio-metric tech.

Lastly, the growth in online shopping, digital transactions and crypto currencies will move society to being cash-free. In much the same way telephone boxes have become a thing of the past, the cash machine will have a similar fate.

“Technology is constantly developing and changing the way we interact with the world around us. As it continues to evolve, the role it plays in our customers’ lives will become ever-more present.”

Nina Bibby
Chief Marketing Officer, O₂ UK

Conclusion

Science fiction And science fact

The great 20th Century British sci-fi writer, futurist and 2001: A Space Odyssey author Arthur C. Clarke once wrote, “Any sufficiently advanced technology is equivalent to magic” – and any technological future gazing like this report can often seem like it’s predicting a magical world routed more in fiction than fact.

Compare our daily existence in 2017 to the late 90s, and the fundamental changes that digital technology has made to pretty much EVERY part of our everyday lives are quite astounding

Compare our daily existence in 2017 to – if you can remember that far back – the late 90s, which was just two decades ago, and the fundamental changes that digital technology has made to pretty much EVERY part of our everyday lives are quite astounding.

Who would have thought back then that by 2017, Brits would be desperate to see the end of things like passwords, landline phones and cash machines?

While mobile technology was becoming part of our lives 20 years ago, the Fear of Running Out was not yet a thing so many millions would one day dread, as they watch the battery strength figure in the top corner of their phones count down.

And the revelation in this report on how the human body of 2049 could look – from sensors embedded in the skin to AR visors – would have felt back then like the ultimate in sci-fi. Perhaps it still does in 2017 – but as Arthur C Clarke knew full well, science fiction has a funny habit of one day becoming science fact.