

# Digital Pulse

How ready is the UK for the digital life?

By Valerie Mocker & Olivia Chapman



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# Executive Summary



## The opportunity: a digital world that works for everyone

The digital transformation has the potential to create many opportunities. Beyond economic gains<sup>1</sup>, the ever deeper integration of the internet and development of new technologies can considerably improve the way we all live and work.

Self-driving cars could make getting around safer and more convenient. Health-monitoring mobile apps can already help us live healthier and even diagnose new diseases more accurately. The internet has also significantly lowered the costs of starting new businesses and is helping us to share unused resources more effectively. However, to unlock the full benefits of the digital transformation, we need to build digital societies that are inclusive and that work for everyone.

*"Globalisation has had these huge benefits of speeding up innovation... But the fact that people, net, see it as a bad thing – and that a vote like the Brexit vote or some other votes are a move to, 'Hey, we don't like change, we want to set back the clock, we want to be more local in our thinking' – that's a huge concern... I do think we need to step back and say, 'Are we doing enough in communities? Are people seeing these benefits?'"<sup>2</sup>*

**Bill Gates, Co-Founder of Microsoft**

## The challenge: public buy-in is key

A successful digital transformation depends on building a digital world that is inclusive and works for everyone. This means that the public needs to be willing and confident to use it. If innovations are introduced in the wrong manner, or the gains too unevenly distributed, public opposition could become a major barrier. The political events of 2016 have certainly shown that ignoring the pulse running through society can lead to heavy and unforeseen backlash.

The business community developing new technologies, and governments shaping policy agendas, need to understand how the public responds to the digital transformation to unlock its full potential.

Therefore, this report asks two crucial questions:

- **How ready are people for the digital life?**
- **If they are not, what is holding them back?**

As this report shows, the majority of UK adults are not ready, or equipped with key skills, to make the most of the technological opportunities that already exist.

# Executive Summary

The new data behind this report

## Which questions did we ask?

We investigated two key questions:

### How open are people to using new technology in their life?

We tested how the public responds to a range of 'hot topics' that are currently taking centre stage when media, politicians and businesses debate the opportunities of the digital transformation. In particular, we tested three areas:

- (New) everyday technology
- Robotics
- Sharing economy

For each of these areas, we presented people with examples of how they could personally benefit and asked them whether they would be open or interested in using the new technology.

You will learn what we found in chapter one of this report.

### If they are not, what are some of the potential issues?

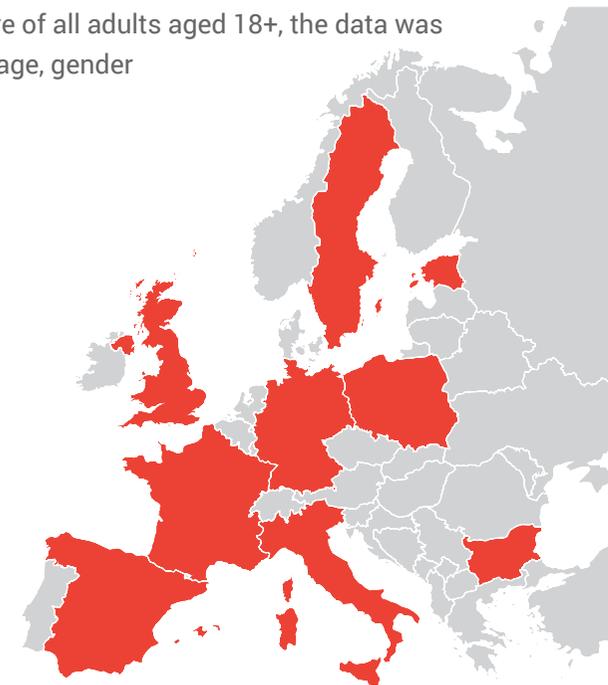
Many factors play into people's relationship with technology. Some of those, like cultural norms, are difficult to test comprehensively across countries. In this research, we focused on four key areas that need to be considered by politicians, policymakers and businesses in each country:

- Do people generally see technology as an opportunity, or as a threat?
- Do people feel that the technological benefits are equally spread across society?
- Do people have the basic skills to actively use technology?
- What threats or problems do people worry about?

You will learn what we found in chapter two of this report.

### Which countries did we include?

Readie, together with ComRes, surveyed 9,000 adults from economies representing the North-West, South, Central and East European regions. The countries included were Bulgaria, Estonia, France, Germany, Italy, Poland, Spain, Sweden and the UK. To be representative of all adults aged 18+, the data was weighted by age, gender and region.



# Executive Summary

## Key findings

### How open are UK adults to using new technology in their life?



UK adults tend to be moderately sceptical about new technology in European comparisons. Bulgarians and Spaniards are often the most open-minded and excited.



Londoners are more likely to say they would try new technologies than those living in other regions of the UK, including letting a robot take care of family members (33 per cent) compared to Scotland (16 per cent), the North (22 per cent), Midlands (17 per cent) and the South (21 per cent).



UK men, compared to UK women, are considerably more willing to try new technologies, such as driverless cars (45 per cent vs 27 per cent).



UK millennials are also more open to new technology than older generations (55+ years). This includes using different digital platforms and sharing their own resources online, such as renting out their home (38 per cent vs 13 per cent).

### What are some of the potential issues?



UK adults think that the benefits of the internet and digital technology are not spread equally across society. People living in towns and cities and those under 30 years old are seen as the biggest beneficiaries.

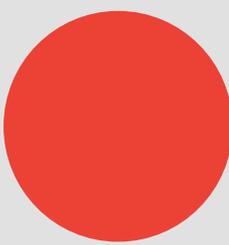
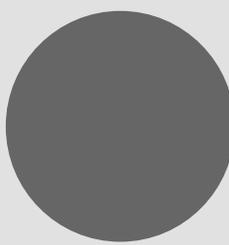
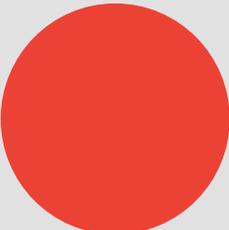
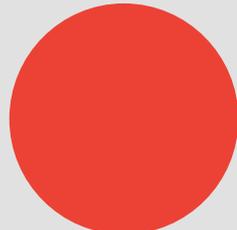
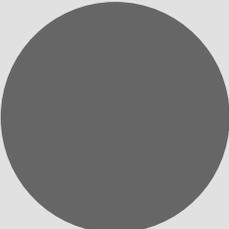
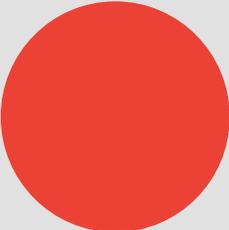
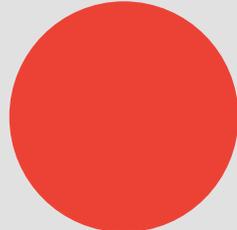
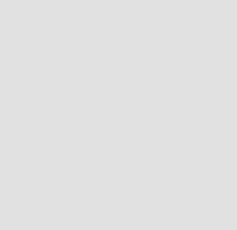
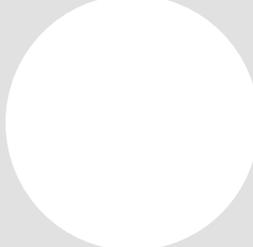
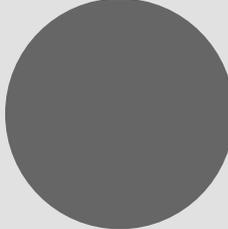
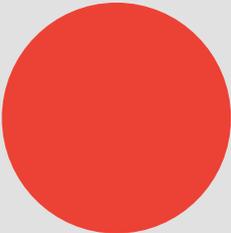


Many lack the skills to actively use technology. Although 95 per cent say they are confident writing and sending emails, only 17 per cent are confident using code to develop software. Furthermore, only 33 per cent of UK employees say they are offered basic digital training by their employers. Employees in areas outside of London are being offered even fewer training opportunities than those in the capital city.



When asked to consider the issues of technological change, UK adults rank the increase in cybercrime, such as hacking, infringement of privacy and stolen data, the breakdown of face-to-face relationships, and the aggression between some people on social media amongst the biggest problems. Job loss due to automation was one of the smallest concerns.

# 1. How open are UK adults to using new technology in their life?



# How keen the public is to use new technologies varies greatly between European countries

## 2017 Readie Ranking.

### How open is the public to using new technology?

Rank	Country	Mean rank
1	 Bulgaria	8.5
2	 Spain	8.4
3	 Italy	7.1
4	 Poland	6.5
5	 UK	5.3
6	 Sweden	5.0
7	 France	3.3
8	 Estonia	3.2
9	 Germany	2.7

This ranking measures public openness to using new technologies in the nine EU countries tested. We combined responses to the eleven examples of technology use cases discussed in this chapter. For each question, we ranked the 9 countries according to the responses. The top country received a score of 9, the lowest a score of 1. We then computed for each country the mean rank over all questions.

The ranking shows how open the public in different European countries is to using a variety of different technologies.

We tested three 'hot topic' areas that are becoming increasingly central to political and business debate around the opportunities of the digital transformation:

- (New) everyday technology
- Robotics
- Sharing economy

We found that the UK public tends to be moderately sceptical compared to other countries.

The following pages compare UK results to the European average\* and results from Bulgaria, which topped our ranking.

\*Average of the nine European countries tested in this research

## (New) everyday technology

Digitalisation is opening up new ways to travel, pay for things, or track our health. This also provides new opportunities for businesses and society.

Volvo, Porsche, BMW, Waymo and Bosch are among the companies prototyping autonomous vehicles in Europe, which are predicted to reduce road accidents by up to 90 per cent.<sup>3</sup>

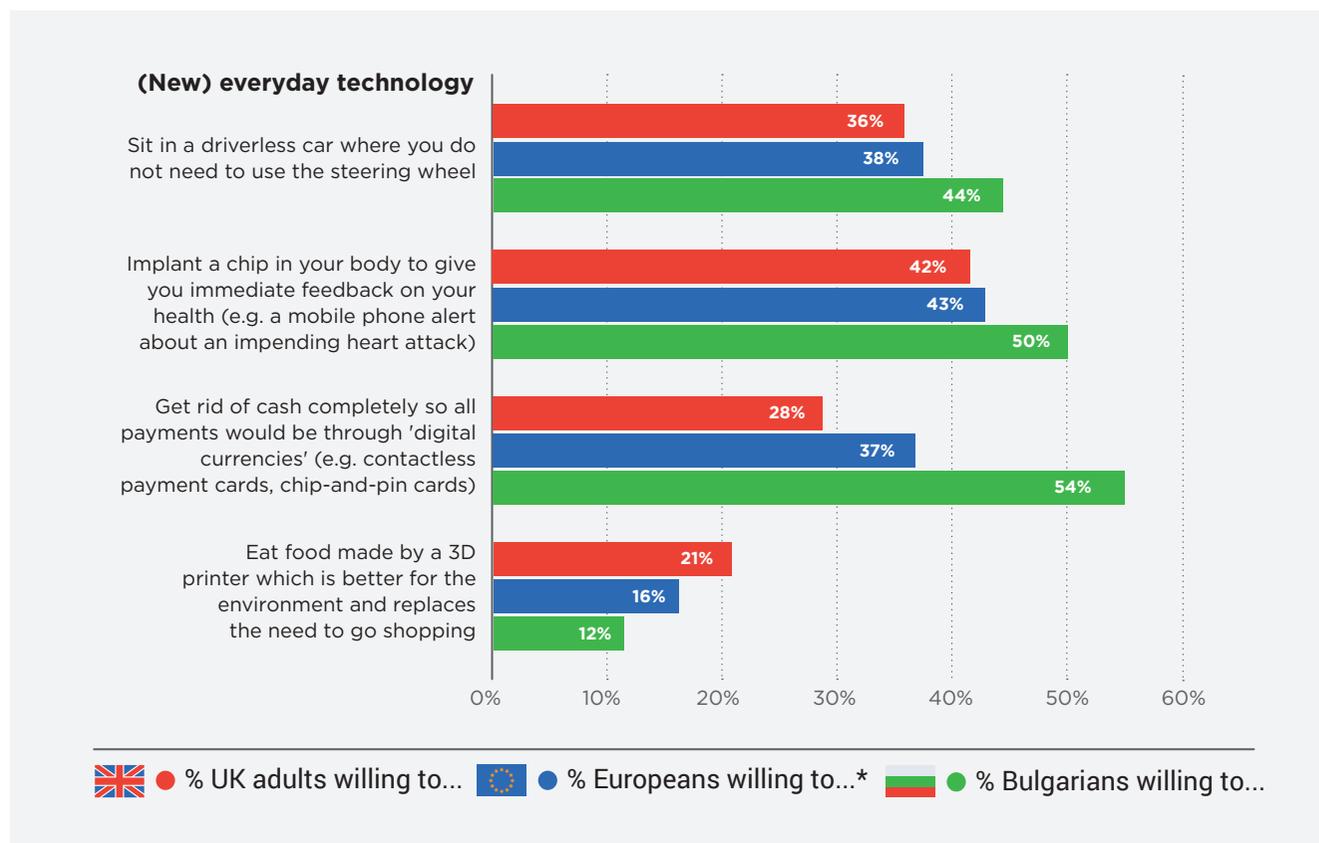
Paying digitally, with contactless cards or smartphone applications, is becoming increasingly popular across Europe. In Sweden, over 80 per cent of all payments are already made digitally.<sup>4</sup>

*"Cash, I think, in ten years' time probably won't exist. There is no need for it. It is terribly inefficient and expensive."<sup>5</sup>*

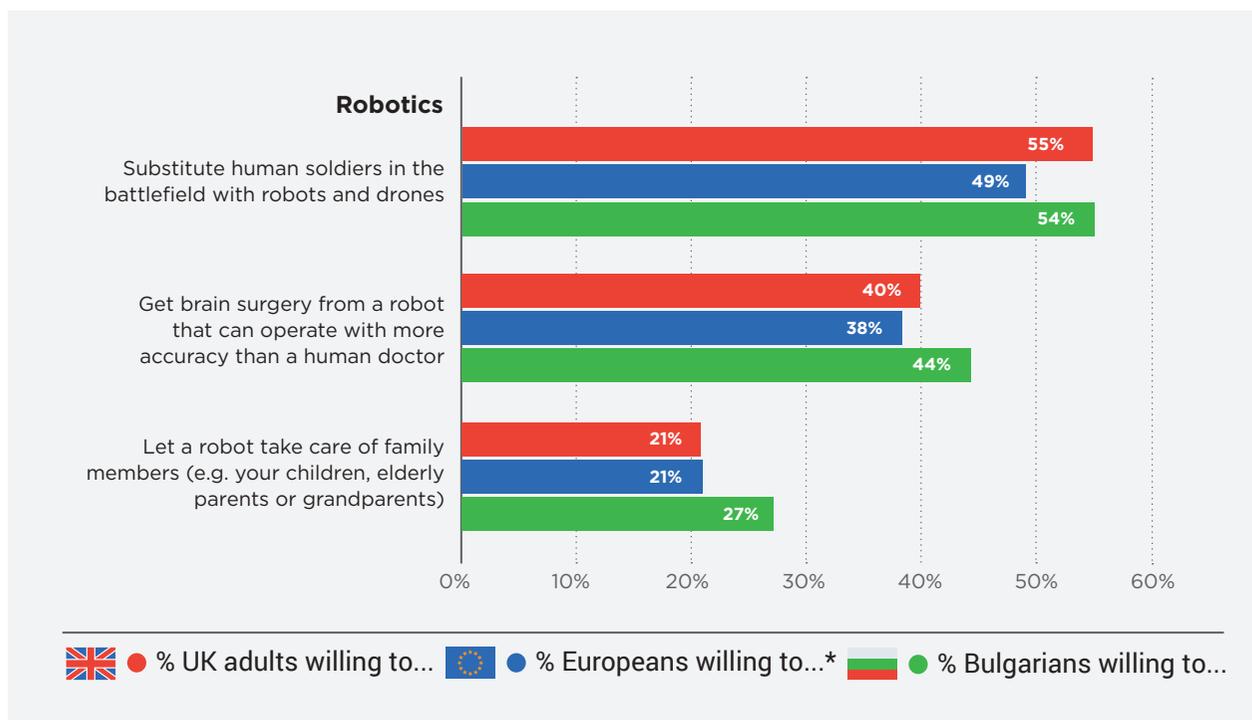
**John Cryan, Chief Executive of Deutsche Bank**

However, our research shows that the majority of Europeans - and many UK adults - are not comfortable using what is already technologically possible.

## Only a minority of UK adults are open to using new technology



## UK adults are more open to living with robots than other Europeans



## Robotics

Dystopian scenarios about robots taking our jobs and destroying humanity are manifold. But, what doesn't grab so many headlines are the many exciting developments in robotics that are providing social benefits to communities worldwide.

Promising pilots taking place across Europe include the Giraff telepresence robot, which monitors the wellness of older people, connects them to healthcare professionals and allows them to live independently for longer.<sup>6</sup> Nao, a humanoid robot measuring just 60 centimetres, is being used in schools to better help autistic children.<sup>7</sup> In September 2016, University of Oxford surgeons performed the world's first eye operation using a robot that can perform high-precision procedures much better than the human hand.<sup>8</sup>

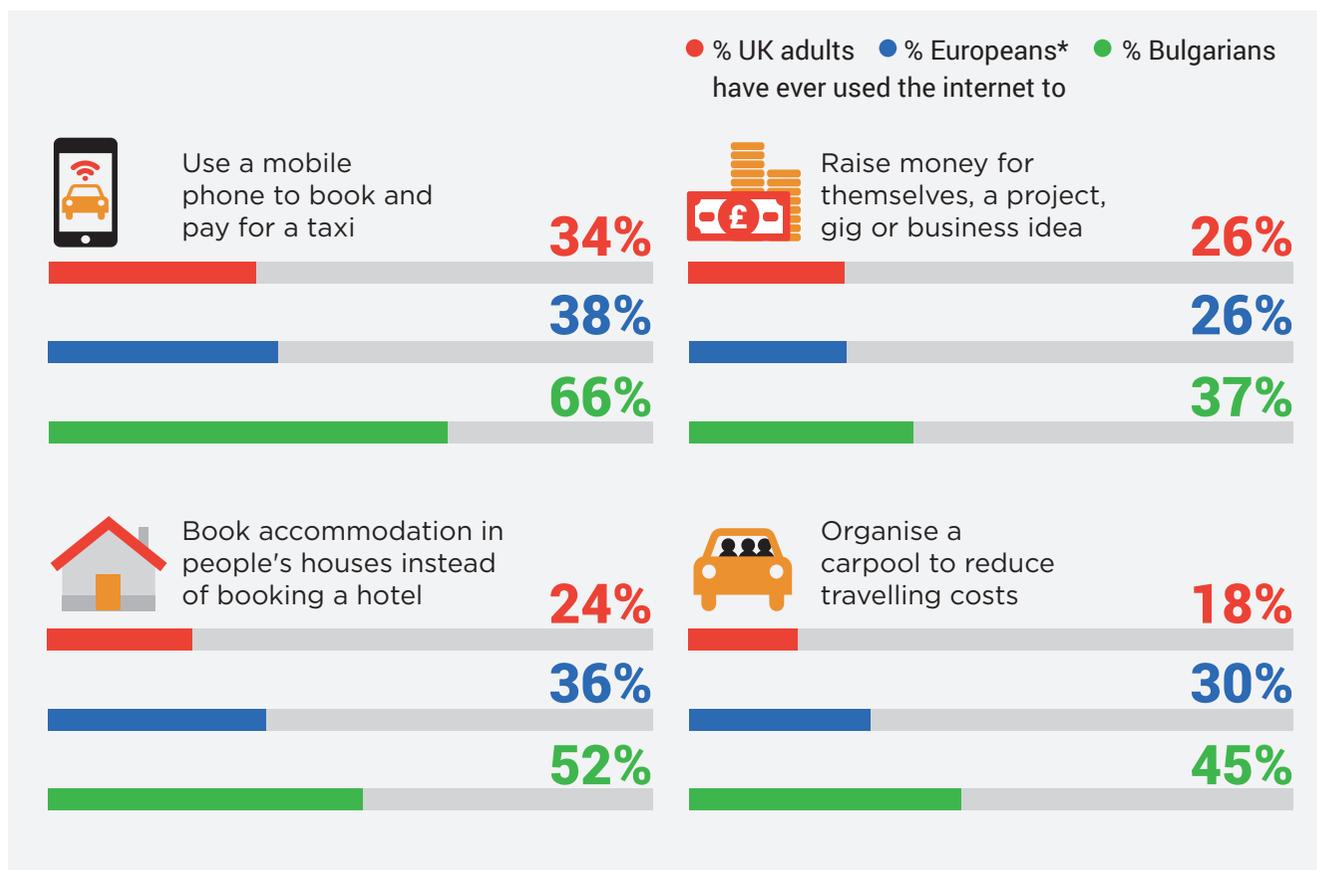
Most Europeans are sceptical about living with robots. UK adults are slightly more open.

## Sharing economy

The economic gains from better use of resources in the sharing economy is estimated at €572 billion.<sup>9</sup> People can now use digital platforms and mobile apps to share resources more effectively and organise transport, find accommodation or raise money for projects.<sup>10</sup>

Participating in the sharing economy is relatively easy and accessible - especially compared to the other technological opportunities we tested. Still, we found that far fewer UK adults have ever used those opportunities than for example Bulgarian adults.

### Who has ever participated in the sharing economy?



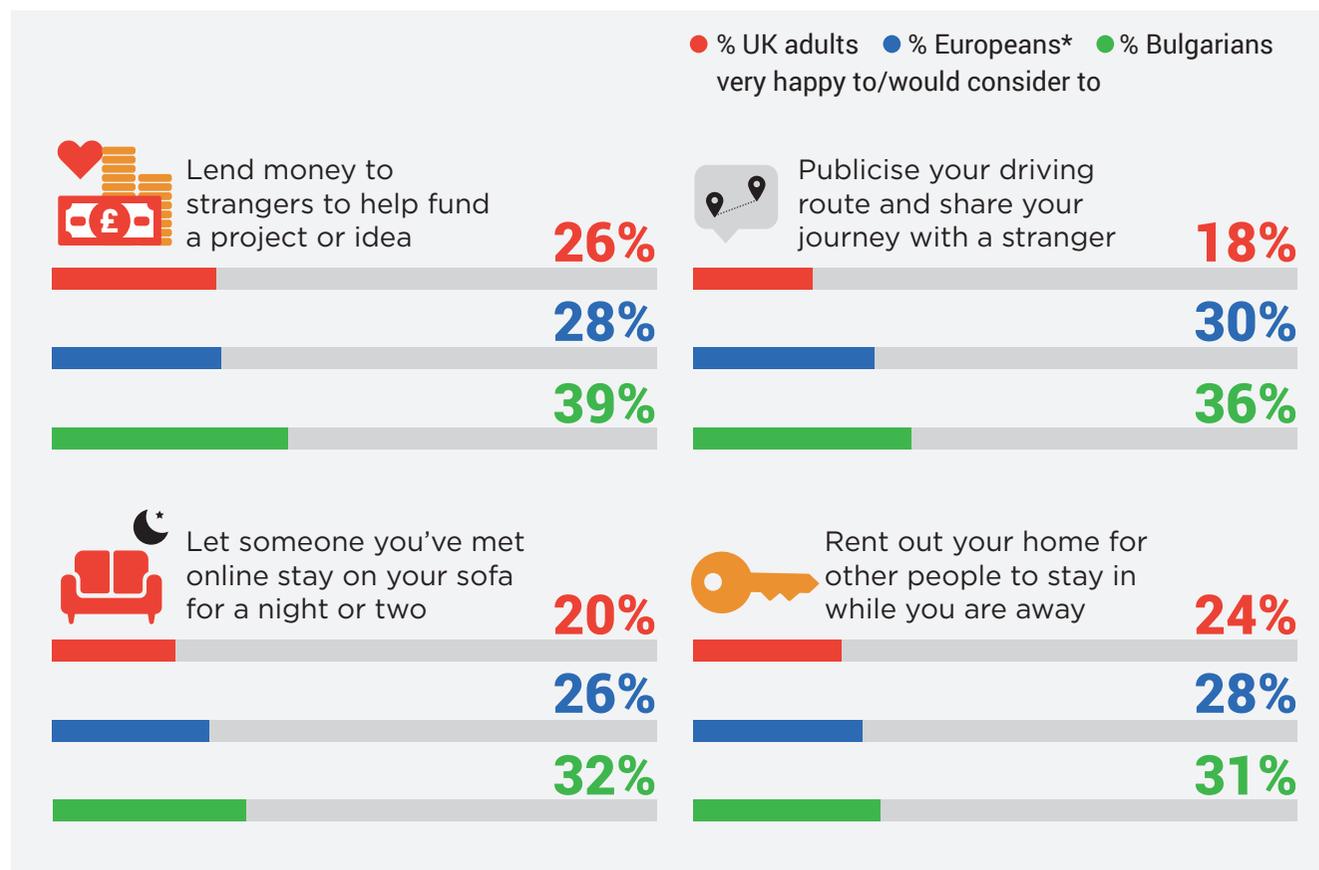
Q: How frequently if at all do you do each of the following? Every day / Every few days / Every few weeks / Every few months or less / Never (This question was not included in the 2017 Readie Ranking.) \*Average of the nine European countries tested in this research

## Sharing economy

The potential of the sharing economy reaches much further beyond using commercial platforms. Digital platforms enable people to share property, resources, time and skills - and sometimes make a little extra money in the process.

Yet the majority of UK adults say they would not want to share their own resources.

### Are UK adults willing to share their own ride, house or cash with others?



Q: How happy or otherwise would you be to do each of the following using the internet? Would be very happy to / Would consider it / Would prefer not to / Would definitely not do / Don't know \*Average of the nine European countries tested in this research

# Demographic differences

In the UK, men, people under 35, people with a university degree, and Londoners tend to be most open.

How does the willingness to use new technologies differ within the UK?

We tested a range of demographic factors: age, gender, education, income and if people live in cities or rural areas. The most significant\* demographic differences changed from country to country. The UK is one of the only countries where we saw significant differences across all demographics.



## Gender

UK men are significantly more likely to say they are willing to try most of the technologies we tested than UK women. Here are a few examples:

% UK ADULTS WILLING TO

**Men** | **Women**

**Sit in a driverless car**

 **45%** | **27%**

**Get brain surgery from a robot**

 **49%** | **31%**

**Let a robot look after family**

 **27%** | **16%**



## Education

UK adults with a university degree are significantly more open to trying a range of new technologies, including:

% UK ADULTS WILLING TO

**University Degree** | **No University Degree**

**Sit in a driverless car**

 **42%** | **31%**

**Get brain surgery from a robot**

 **45%** | **35%**

**Let a robot look after family**

 **18%** | **24%**

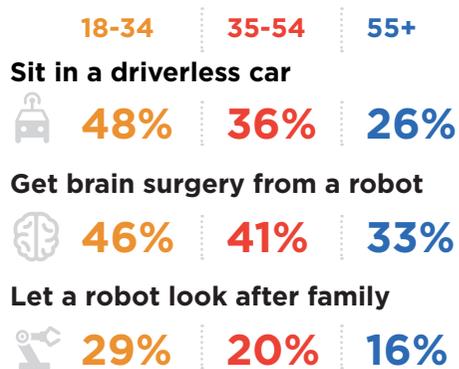
\*Significant refers to differences at the 0.05 significance level



## Age

Young adults (aged 18-34 years) are significantly more open to technology than older generations (55+ years).

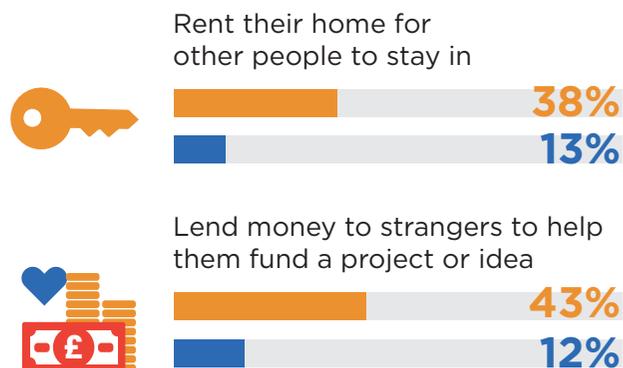
% UK ADULTS WILLING TO



Likewise, young adults say they are most open to using the internet to share their own resources online.

% UK ADULTS WILLING TO

● 18-34 ● 55+



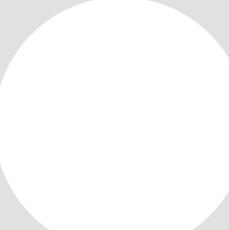
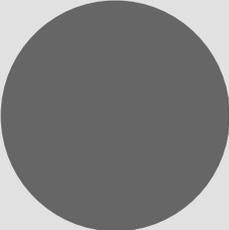
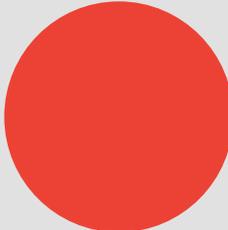
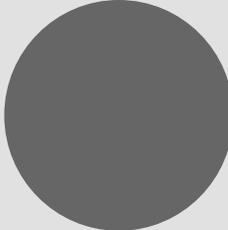
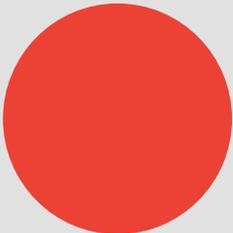
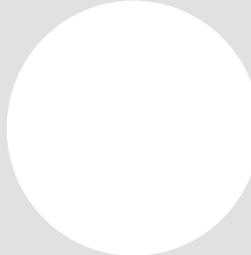
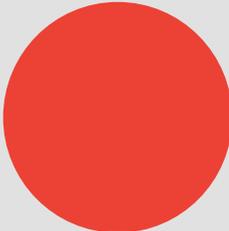
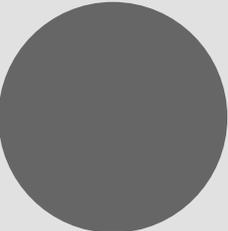
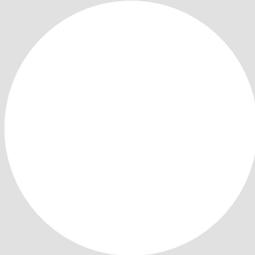
## Different parts of the country

Londoners are more likely to say they would be willing to use new technologies than those living in other regions of the UK. For example, 33 per cent of Londoners would let a robot take care of family members compared to 16 per cent in Scotland, 22 per cent in the North, and 17 per cent in the Midlands.

## Income

The more people earned in the UK, the more open they tended to be to new technologies. In France for example, income was also a significant factor, whereas it made comparatively little difference in Germany.

**2. What are some of the potential issues?**

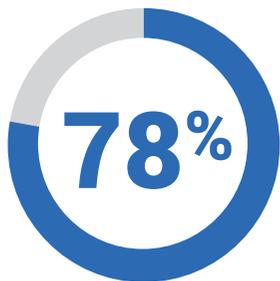


# Technology itself is not the problem - the majority is excited about its potential

The vast majority of Europeans say they are generally positive about technology. This is also true for UK adults.



of UK adults say they are excited about the future and the opportunities that new technology is bringing to society



of UK adults say that the positives provided by the internet outweigh the negatives



of adults living in London say that they are excited about the future and the opportunities that new technology is bringing to society - more than any other regions in the UK



## What could explain why so few UK adults are willing to embrace many new innovations?

Many factors such as personal preference, experience, social background and cultural norms play into people's relationship with technology.<sup>12</sup> Nonetheless our research identified **three broad issues that government and businesses should consider**. Tackling these will likely help people build confidence and trust in new technology.

# 1 Many think that the benefits are not shared equally across society

The digital transformation does bear opportunities for everyone. To create a truly inclusive digital society, everyone needs to feel like they will benefit from the digital transformation. However, the majority of UK adults perceive those under 30 years old and people living in towns and cities as the main beneficiaries of the digital transformation.

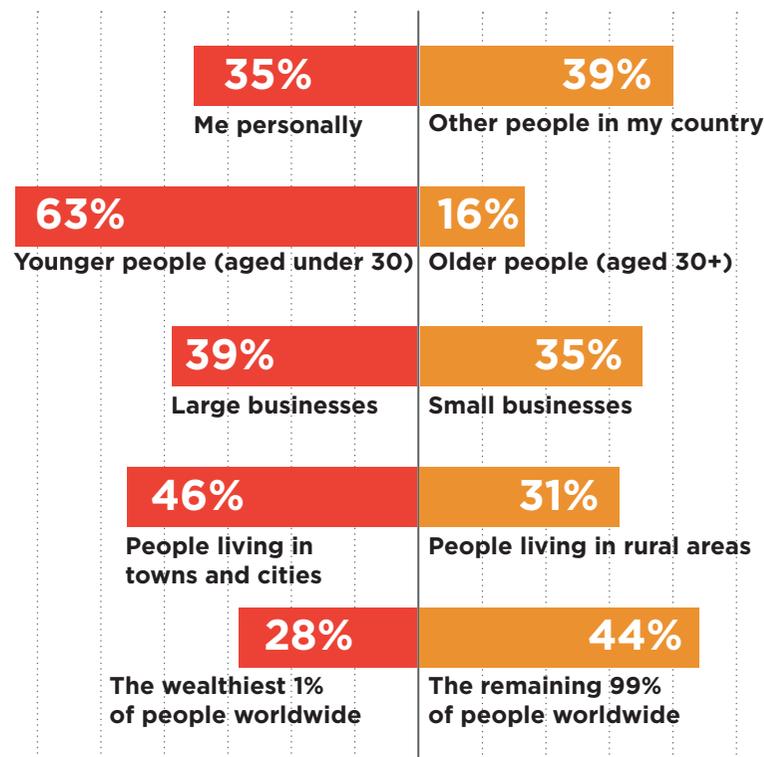
Compared to other Europeans, more UK adults thought technological developments benefited others in their country over them personally (34 per cent vs 39 per cent)



The market for technology to assist ageing adults is actually already worth billions of pounds and is growing rapidly.<sup>13</sup>

## Who has benefited more from the digital transformation?

% UK ADULTS WHO AGREE



Q: For each of the following people, who do you think has benefited more from the internet and developments in digital technology? Statement A, Statement B, Don't know

## How does this compare to other countries?

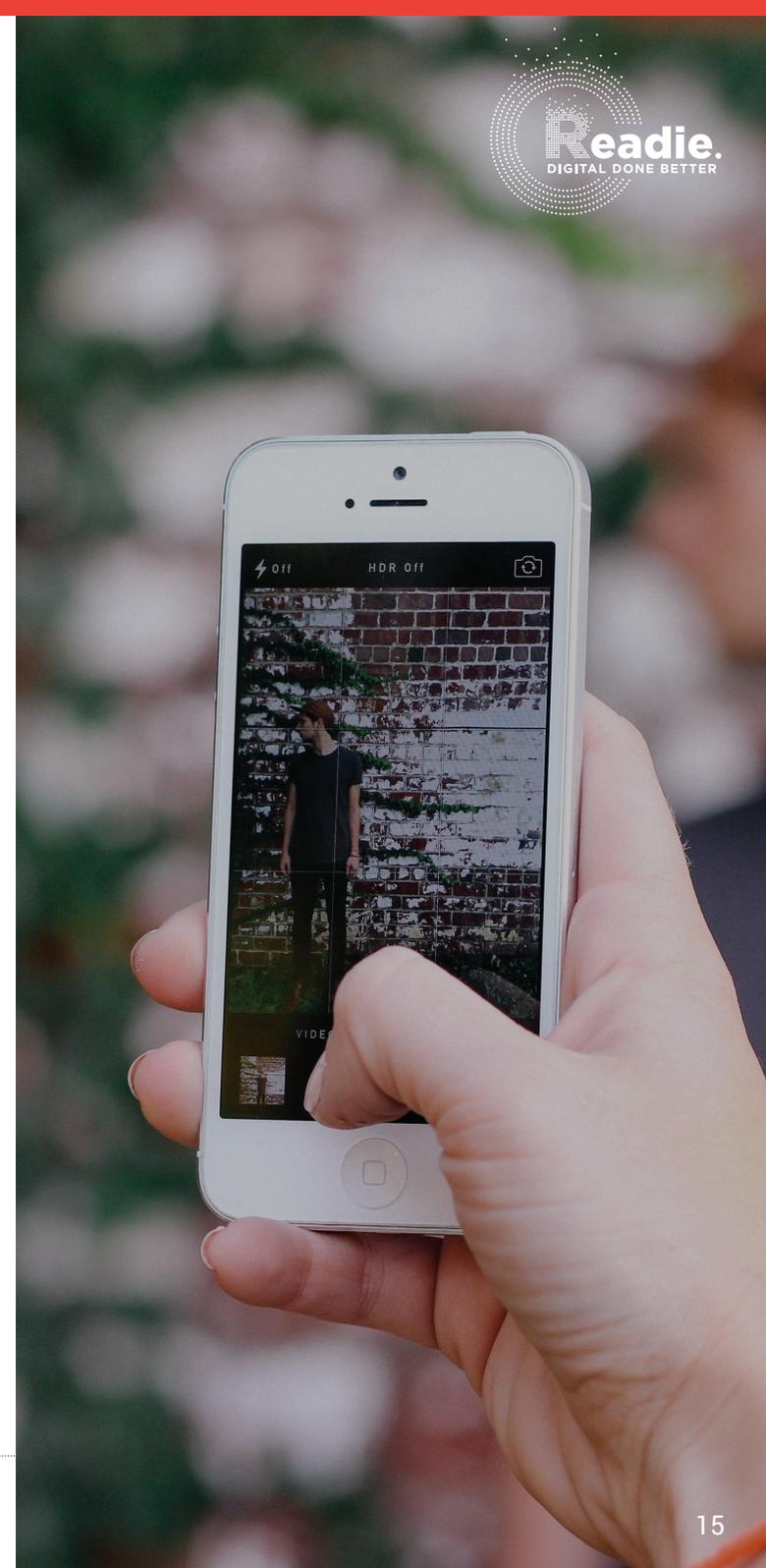
Many other European countries we studied face similar challenges. Many adults said they thought that large businesses, those under 30 years old and people living in towns and cities are the biggest beneficiaries of the digital transformation.



Estonia is an exception to this. Here, only 25 per cent believe other people in their country have benefited more than they have personally. Almost twice as many (47 per cent) people see themselves as the main beneficiaries of the internet and new technology.

There are probably a few things to be learnt from the Estonian approach. Estonia has strongly focused on implementing online technology across society to simplify day-to-day living - from filing taxes online to parents accessing their children's school timetables, homework and marks.

Other countries, including the UK, might want to think more actively about how they can support technology that has a clear public benefit, and also communicate the opportunities of the digital transformation more strongly in those terms.



## 2 Only a minority of UK adults have the digital skills needed to actively use technology

### Everyone needs digital skills

In a world that is increasingly digital, everyone will need a basic level of digital literacy to have the confidence and ability to use new technologies.<sup>15</sup> This equips everyone with the ability to not simply be passive consumers of technology, but active agents, or 'digital makers', who can improve their lives and those around them.<sup>16</sup>

The future workforce will need to complement developments in new technology. Optimists hope that machines will not replace human workers, but collaborate with them, taking over laborious tasks like heavy lifting or routine work while humans can focus on more creative, complex work and direct the robots.<sup>17</sup>

For this to happen, workers will need the necessary digital skills and understanding of technology. Among those core skills required is the ability to code and programme. Many of the roles which do not require direct coding skills will still need a greater understanding of digital technologies.

### But what are those skills?

'Digital skills' encompasses a broad spectrum of roles and abilities, from understanding how a computer works to learning how to use social media responsibly.

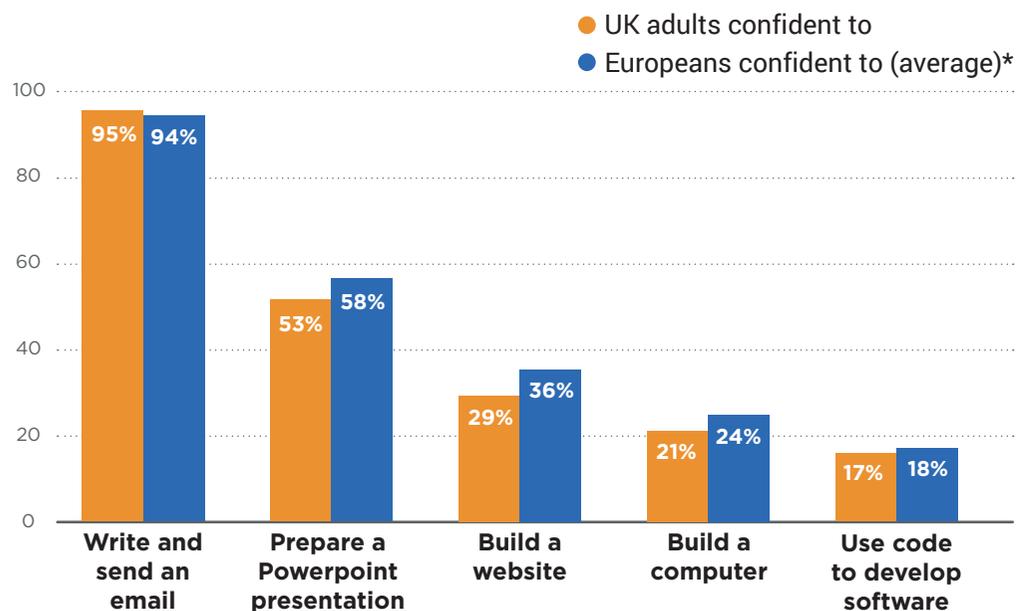
We tested how confident European adults feel in a selection of key skills:

- building a website
- coding
- building a computer

These are skills not just needed by those in 'technical jobs'. They allow people to strengthen their basic understanding of technology and can be seen as key building blocks of the digital transformation. Importantly, they also empower people to use technology to their own advantage: from building a website to announce a new sports club, to being able to run a small business online.

## Digital skills confidence amongst UK adults

% adults confident



While 95 per cent of UK adults say they are confident writing and sending emails, less than two in ten say they are currently confident using code to develop software.

Q: If you were asked to do each of the following today, how confident or otherwise would you be in your ability to do each one? Very confident / Fairly confident / Not very confident / Not at all / Don't know \*Average of the nine European countries tested in this research

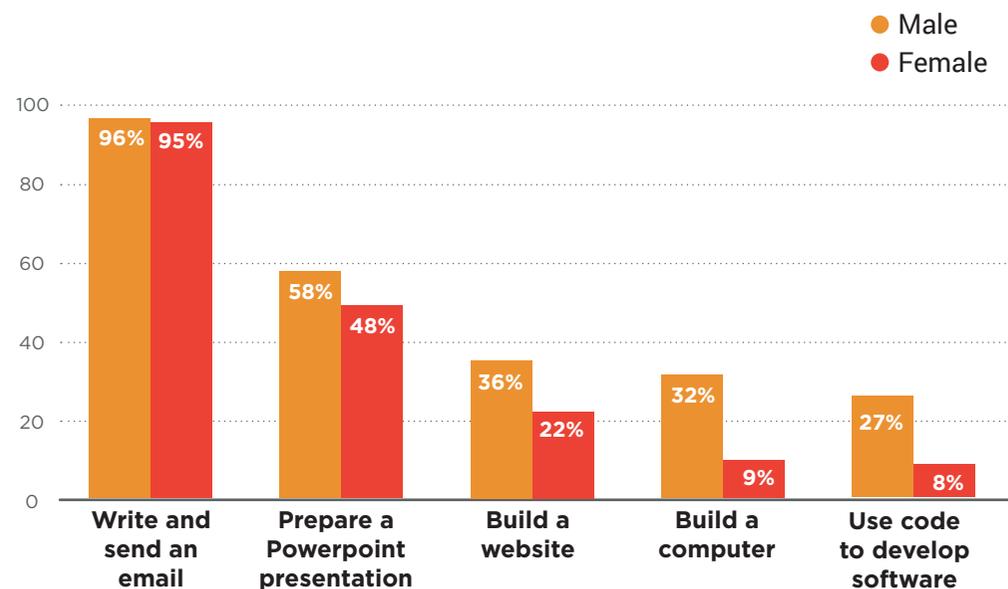


## The digital skills divide deepens between gender and age

Gender and age are again important factors when it comes to the confidence UK adults have in their digital skills. Men are around three times as likely to say they feel confident to use code to develop software (27 per cent of men vs 8 per cent of women) and build a computer (32 per cent vs 9 per cent).

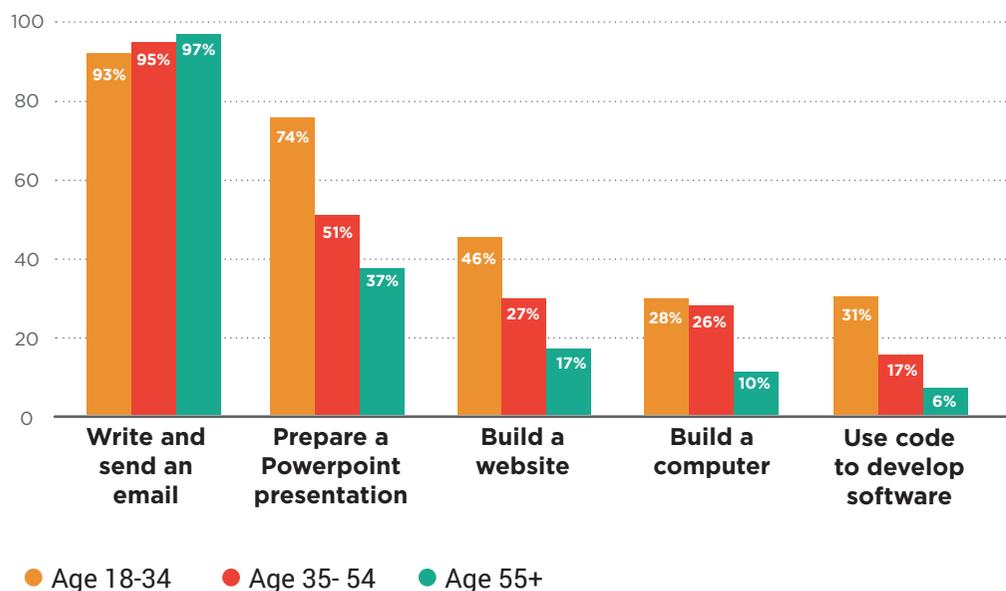
## UK men are more confident than UK women in their digital skills

% adults confident



## UK young adults are most confident in their digital skills

% adults confident



Young adults aged between 18 and 34 are also significantly more confident than older generations.

All adults - regardless age, gender and background - need a higher level of digital skills to confidently participate in an increasingly digital world. Having implemented programming into the national curriculum in 2014,<sup>18</sup> the UK has made an important step towards developing skills at a young age.

However, what about people already in the workforce?

## Businesses have to play a more active role empowering the existing workforce

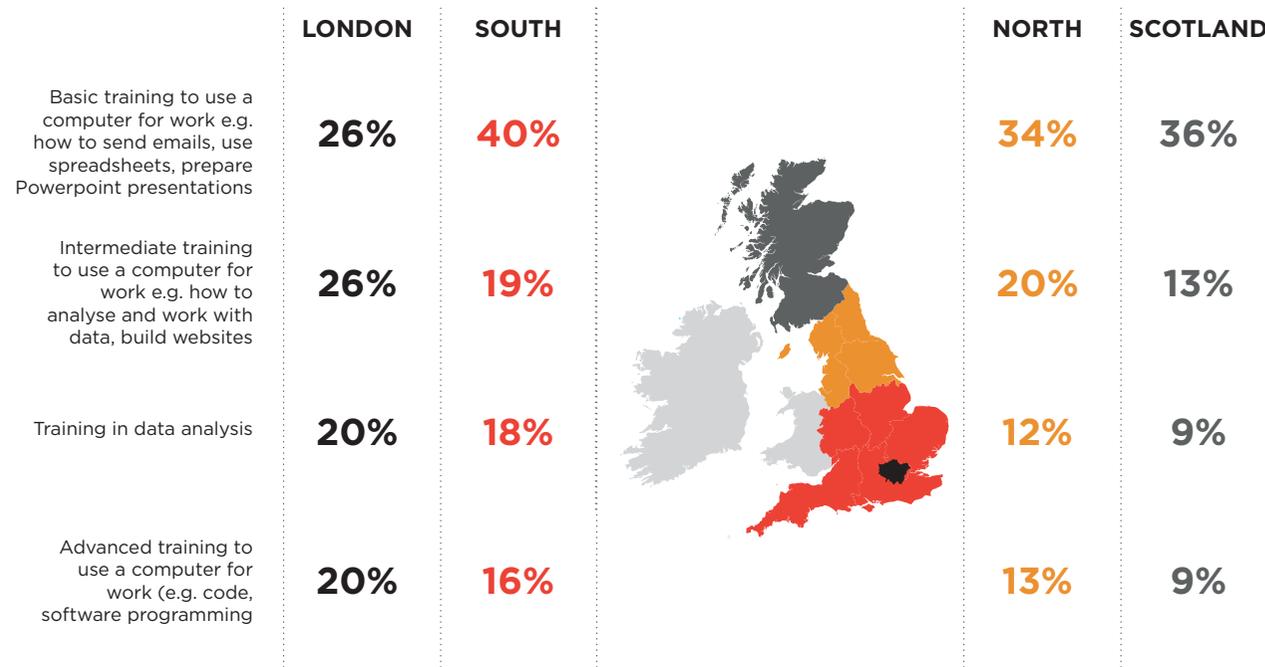
Employers can, and have to, play an important role in equipping today's workforce with the skills needed tomorrow. Clarity around new roles and access to training and development opportunities are key areas businesses need to tackle, and where government should support as needed.

A higher level of digital literacy can also help to address some of the UK public's scepticism towards new technology. This will be essential to building a globally competitive digital economy.

Our research, however, found that less than three in ten UK adults are being offered basic digital training by their employers. Even fewer have access to advanced digital training, for example learning how to code. Londoners are offered more comprehensive and advanced training than those in other regions. The exception being 'basic training', where Scotland offers this more extensively.

## Londoners are offered more digital skills training than adults in other regions

% UK employees offered training



# 3 Data security and cybercrime are a concern for many UK adults

The vast majority of UK adults, as like most European respondents, generally believe that technology and the internet will positively impact their lives (see page 13).

However, some anxieties remain. Understanding what concerns the public about the internet and new technologies can help businesses and governments prioritise areas that may require dedicated focus, reduce the risks and help the public build confidence and trust in the use of new technologies.

## So, what are some of the key concerns the UK public has about digital technology and the internet more broadly?

We tested a variety of potential issues. In the UK, cybercrime such as hacking, infringement of privacy, and stolen data, is perceived as the top problem caused by the internet. UK adults also said that one of the biggest priorities for their government should be to protect people's data from cyberattacks. Interestingly, some issues like job automation - which many in the business and policy community currently worry about - was one of the smallest concerns of those tested in our study.

### UK adults say the top three problems are



1

Increase in cybercrime (e.g hacking, stealing people's data, infringement of privacy)



2

The aggression between some people on social media (e.g online bullying, trolling)



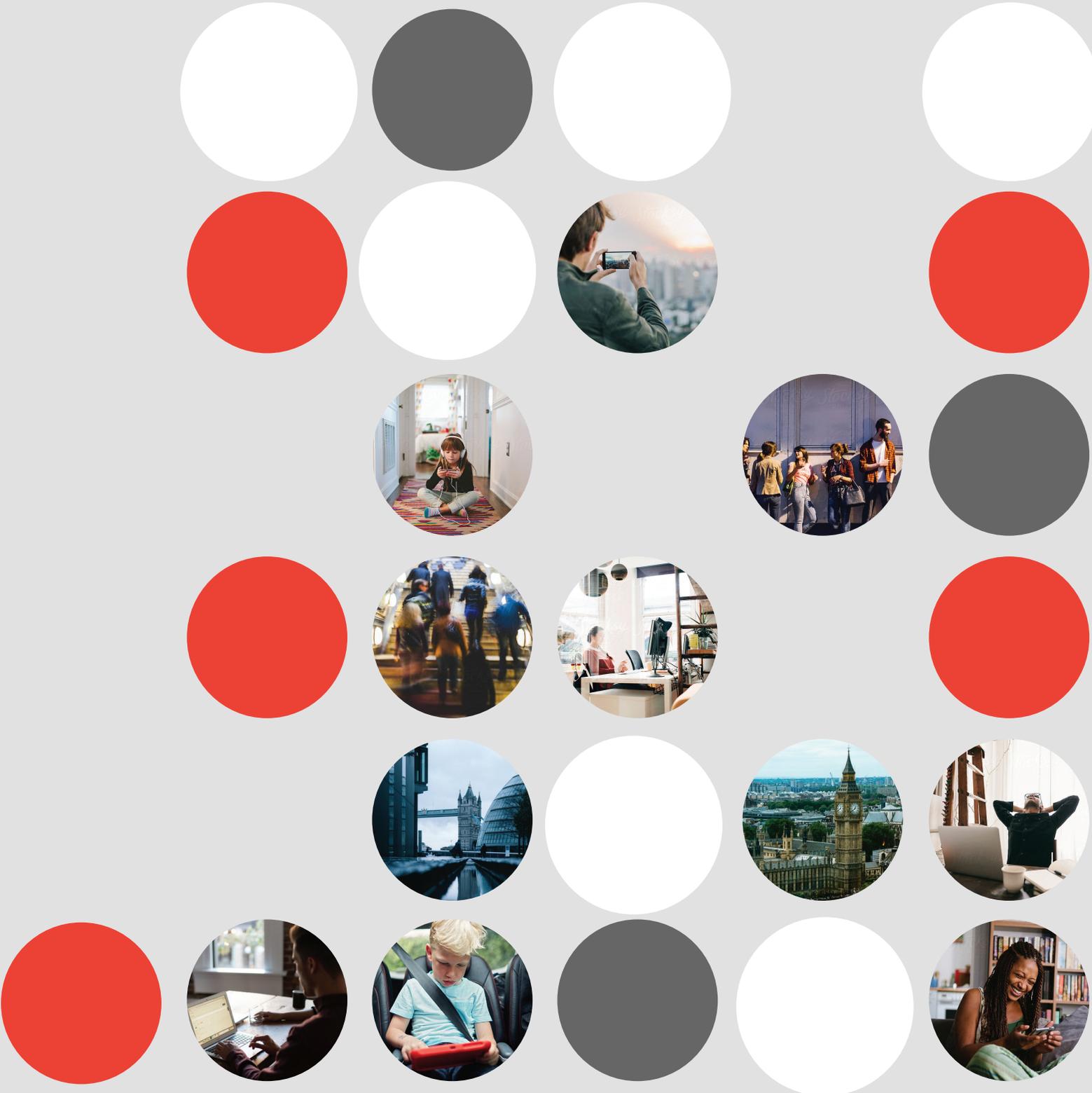
3

The breakdown of face-to-face relationships

Q: Which of the following issues regarding digital technology and the internet do you think should be the biggest priority for your national government?

Q: Which of the following, if any, do you think are the biggest problems caused by the internet?

# 3. Summary





Digital technology is creating many opportunities for people and businesses across Europe but the pace of change brings unique challenges when designing digital policies and national strategies.

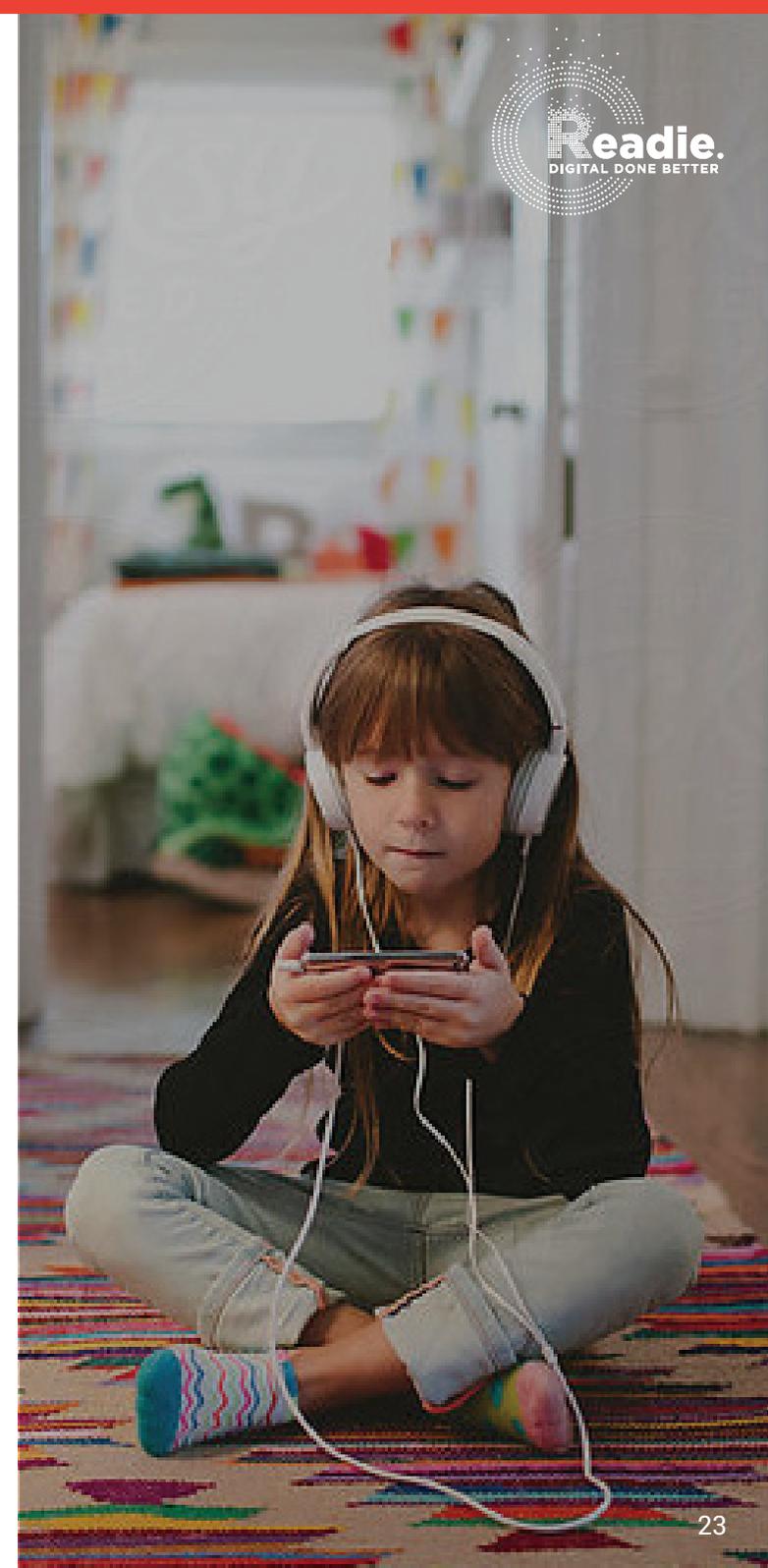
The majority of the UK public are not ready or equipped to make the most of the digital transformation.

Developments in technology should benefit all people. However, as our research shows, a number of groups – among them older people, those living outside of London, and women – feel less confident about digital change, and are thus unwilling to engage with the opportunities.

Governments and businesses must consider more carefully how open different sections of the population are to new platforms and technologies. It is clear that most people are optimistic about the future. Building confidence is key to empowering people to trust and embrace new technology which has potential to improve all our lives.

But this report is just the start of the conversation. That's why Readie is working with governments and businesses, to help them make sense of the challenges and harness the opportunities. By sharing experiences of what has, and hasn't, worked we can help Europe drive digital economic growth and prosperity. Get in touch to find out about our programme:

[info@readie.eu](mailto:info@readie.eu)



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All errors and omissions remain those of the authors.



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## About Readie

Readie is a centre dedicated to empowering policy and decision makers with cutting edge insights into the big debates and policy solutions for Europe's digital economy. We provide a platform for sharing existing policies, key trends and innovative approaches to foster digital economic growth.

Readie is managed by Nesta, the innovation foundation, and supported by Google, RKW and NEMODE as part of the Research Council's UK Digital Economy research programme.

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## About Nesta

Nesta is a global innovation foundation. Our mission is to spark and grow new ideas to improve how the world works for everyone. We use our knowledge, networks, funding and skills to take on big challenges, working in partnership with others to make change happen.

We are a UK charity and our work is enabled by a financial endowment. Nesta is a registered charity in England and Wales 1144091 and Scotland SC042833.

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