Technology in a Transforming Britain

FUJITSU

shaping tomorrow with you

Contents

Realising a once-unimaginable world

If you had to pick the one word most synonymous with the 21st century, surely 'change' would be it.

Had you told somebody at the tail end of 1999 that they would soon be walking around with a handheld computer in their pocket, connecting them to everything and everyone in the entire world at the touch of a tiny pane of glass, they would have given you a sceptical look.

And if you told them they may soon sit in the back of an autonomous car ordering a drone-delivered pizza by speaking into their watch, they likely would have laughed in your face.

But this is today's reality: things that belonged in the minds of science fiction writers just a few decades ago are now within our grasp.

While it could be argued that we've always had periods of drastic change – just look at the last three industrial revolutions – the difference today is the speed at which that change is occurring.

And technology is driving this.

It's an incredibly exciting time. But also a challenging one. And uncertainty seems to be in uncomfortably large supply.

As a business, you can't set plans in stone for five, three or even one year now. We live in a digital age of real-time information and instant impact. The business world must be just as agile. If you're going to maximise productivity and, ultimately, success, you have to be ready to react to market changes in a matter of months, or even weeks.

And for some citizens the pace of change can feel baffling. Almost alienating. Particularly for those who didn't grow up in a connected world.

Couple this with the wider societal transformation in recent years – the vote to leave the EU, the rise of 'fake news' and the growing skills gap, to name a few – and it's clear that we, as a society, can't simply let things run on uncontrolled.

Instead all stakeholders, from businesses and the public, to government and education, need to work together and make the kind of proactive, decisive decisions that will ensure Britain transforms in a way that secures a prosperous future for all.

Technology can lead the way through this period of change but to achieve that, we first need to understand exactly how the world and the UK within it is evolving, the part technology is playing in all of this and what people really want Britain to look like in the coming years.

That's why we surveyed 2,000 members of the public and over 600 senior business decision makers across the UK: we wanted to hear what excites them about the changes happening in this country – but also their fears and concerns – so we can help shape a future that works for everyone.

Rupal Karia

Managing Director - Commercial Sector

Wanting progress; fearing change

We're constantly told about the brilliant innovations powering the way we live and work across the world.

Technology leaders, future-gazers, business figures and even some politicians: they appear in our newspapers, on our television screens and on our social media feeds to try and persuade us change is predominantly good.

And for the most part it has been – just look how far we've come in areas like retail and financial services and our ability to stay connected with people wherever they are in the world. Change can be revolutionary – opening up opportunities for everyone in society.

But how often are people asked whether they actually want change or not?

Whether it's technological, social, political or otherwise, the UK citizen often feels like a bystander to change. It is something that happens to us rather than a result of any conscious decisions.

In short: we're presented with a solution before we even know we need it. And not everyone is completely comfortable with that.

When we asked UK citizens how they feel about the significant transformations happening across the country, from political changes to the ageing workforce, most (46%) of the public said they feel negatively about it.

Looking at the technology sector, where transformation is especially powerful, discovering that the UK feels negatively about change has the potential to be a major challenge.

It doesn't matter how ground-breaking your product or service is or how many important problems it solves – if the people you want as customers aren't ready for it, you'll struggle to get it off the ground. But nothing is permanent, of course. Attitudes – like technology – can evolve.

With 43% saying they are happy about the way society is developing, there is still a huge opportunity to tip the balance in favour of significant progress.

70% of business leaders believe life in Great Britain has **transformed**

In business, the only certainty is uncertainty

The vast majority (70%) of the companies we spoke to believe life in the UK has changed and that they expect its transformation to continue.
Like the public, however, business leaders have some concerns about what that change actually means for them.

Almost half (48%) are worried about the impact societal changes such as the skills gap and political uncertainties are having on their organisations, while 53% said external issues play a bigger part in business decisions than ever. 56% say technology development in particular is having an influence on decision-making.

Nearly half again went as far as to say they're worried about the future of their business, with 39% saying their organisation is not fully prepared to deal with the socioeconomic changes they believe are coming. When looking at the impact of socioeconomic changes on society as a whole, the general view seems to be equally pessimistic.

58% of the general public and 41% of business leaders have negative feelings about the way these changes are affecting the UK.

But while it's clear both the public and business leaders have some negative feelings towards the way the UK is changing generally, what are they specifically concerned about? And what do they feel more positive about?

Let's start with the latter: 86% of business leaders feel positively about the change technology is driving within their organisation. And a further 40%

believe multiculturalism is driving positive change, compared to just 21% who feel negatively.

As for the changes having a negative impact, the top three cited by business leaders were:

51% **50%** **51%**

- **Global economic uncertainty**
- **Political turbulence**
- **The threat of terrorism**

Interestingly, all the pain points highlighted by business leaders seem to stem from ambiguity. This suggests it is uncertainty rather than tangible change that's impacting the way these people feel. But what about the public?

One interesting finding to come out of this study is that 22% of the British public believe the changes sweeping the country are good for employment opportunities. While it should be noted that 40% believe the changes are having negative impact and a 24% feel the impact is negligible, for more than two-in-10 members of the public to feel positively about employment opportunity is noticeable when compared to the public's views on other factors causing change - just 13% believe socioeconomic changes have positively impacted the cost of living. Where advances in technology do displace jobs, 60% of the public believe the technology companies should be responsible for reskilling displaced workers, and in a positive sign, 61% of business leaders agree with them.

Technology companies are increasingly being seen as much more than just product or service providers and being expected to play a key role in wider society – a theme we'll explore more deeply later in this report.

In terms of the negative impact of change in the UK, the general public feel strongly about two areas in particular:

62%   **51%**
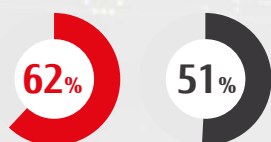
- **Quality and cost of living**
- **The economy**

As for their concerns about what's ahead, the public don't seem to have a huge amount of confidence. Only 34% of the British public believe the UK is prepared for a digital future.

Technology's growing role in helping society through change

In recent times, it has been impossible to ignore the scale of change the UK is undergoing in technology, business, government and everyday life. One factor that we all know is on the minds of businesspeople and the general public is Brexit and as one would expect, this study confirmed that.

When asked to name the biggest challenge facing the UK's economic future, the majority (47%) of business leaders unsurprisingly cited Brexit, while 46% said it's already impacting their decision-making.

A further 46% stated that uncertainty around the impact of Brexit has slowed their growth. This is in line with insight already in the public domain with the CBI, for example, stating 4-in-10 businesses believe Brexit has hindered their investment plans. For the public, the findings were similar with 61% of the public believing Brexit is a major challenge facing Britain today.

Exploring what could be causing such concern, significance may be drawn by looking at the importance business leaders place on being able to do business globally, with 80% of business leaders believing the ability to partner or do business with global organisations is important to their future success.

While the UK's eventual exit from the EU may not impact this in any way, until negotiations are complete, business leaders and the public are, according to the results of this study, likely to remain concerned and for some, this comes with a negative view. Indeed, looking at other commonly reported business challenges, it's noticeable that the more internal factors like skills (7%) and cybercrime (6%), something which threatens their very existence, are cited by far fewer business leaders as being the primary challenge they face. However it should be said that concerns around skills and cybercrime do become clearer when it comes to operational worries later on in the study.

Continuing the technological theme, a key positive that came out of this study was the evolving role of technology companies in society. While some societal change is seen negatively, technology is put forward by both business leaders and the public as the answer to many of the challenges the country faces. Given the key role technology is seen by many to be playing in addressing the UK productivity challenge and improving efficiency across sectors, this may

not come as too much of a surprise. What is really interesting though is the impact that role is having on how technology businesses are viewed and the expectations that come with that.

With technology companies playing an increasing role in shaping the way we live and work, people believe these brands have a responsibility to do more than just make a profit.

In fact, aside from the current government, the organisations deemed to have the biggest influence over the UK's future are Facebook, Google and Amazon.

This is huge. No longer should major technology brands merely call themselves businesses. Their role is much bigger than that.

In fact, 50% of the public and 77% of business leaders believe private companies are responsible for driving change in the UK.

It's clear the majority of people in this country believe technology firms and other organisations can play a key role in what happens next.

More than that: it's expected of them.

And business leaders are aware of this sentiment – 55% of them said the public increasingly looks to private companies for responsible leadership, and 57% believe the future success of their organisation depends on their ability to drive change and innovation in the UK.

But are they doing enough for society?

49% of business leaders surveyed said no, while 37% believe their competitors are doing more than they are to drive the country forward.

This points towards two things: many business leaders lack confidence in their company's ability to impact wider society, and they assume that most other organisations have already overcome this challenge and that their own business has now fallen behind.

A force for good – no excuses

Importantly, private companies aren't just expected to drive future change – they're looked upon as the catalysts for building a better society.

Almost two-thirds (63%) of the UK population believes private firms have a responsibility to give back to the community, and 68% of business leaders agree.

But it seems those companies are not yet trusted to do so.

Only 31% of people believe businesses have good intentions, while just 30% believe brands when they say they're doing good.

31%　**30%**
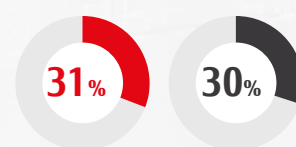
- **Believe brands have good intentions**
- **Believe brands that claim to have good intentions**

All of us in the UK should be hoping the general public's pessimism isn't reflective of reality, particularly when business leaders believe the UK's

position on the global stage is likely to be impacted by these socioeconomic and political changes.

Just 10% of those we surveyed believe the UK sits outside the top 10 most influential and powerful business nations, but 21% think Britain will fall outside that core group by 2027 – a worrying trajectory.

It seems an unclear and potentially rocky future lies ahead, then. But despite the uncertainty highlighted by this report, one point came out loud and clear:

The vast majority of business leaders (56%) believe they have a responsibility to come together and address the socioeconomic challenges facing the UK, compared to the 15% who disagreed that this was their role.

53% of the public is **happy** with the changes technology is creating
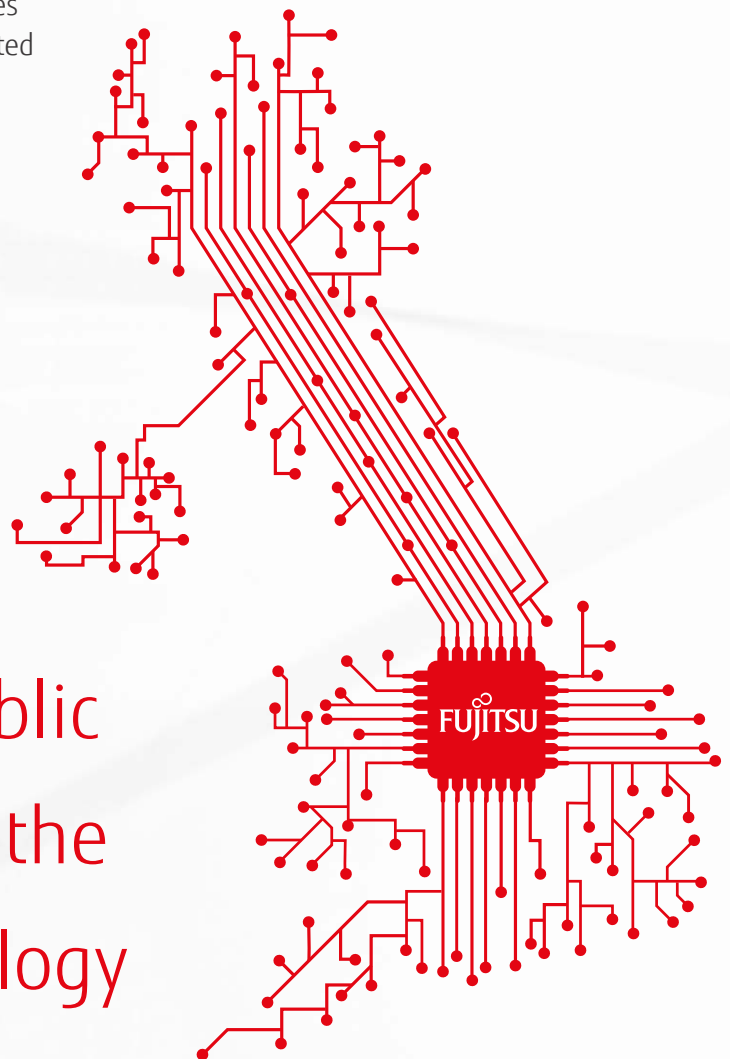
Chapter 2

A Britain built on tech

"There's a way to do it better. Find it."
- Thomas Edison

Anybody who has witnessed the stellar growth of companies like Amazon and Uber will be able to relate to that statement.

But while these are the brands so frequently cited in reports like this as example of new players disrupting old markets, there are countless examples of technology companies dramatically transforming the way we do things every day. From the work being done in robotics and AI by engineers at Dyson's research centre in Wiltshire, to Arm's Innovation Program.

And it seems the public agree with this sentiment – 88% of those we surveyed said technology is driving societal change, while 28% said it is the main driver of change in the UK.

Business leaders, too, believe technology is having a profound impact – 89% said it is driving change within their business and 37% said it's the main driver.

In fact:

65% of business leaders said their business has been fundamentally changed by technology

69% said the same about their sector

63% said their organisation is undergoing digital transformation

As a result of this impact, 56% of business leaders now see technology development as a key factor in their decision-making – the most influential of any external socioeconomic factor.

Clearly, then, it's not an exaggeration to suggest technology is playing a fundamental role in shaping what the UK will look like in future.

But are people generally happy with that influence? According to this research, the answer is yes, with 53% of the UK public feeling positive about the societal changes technology is creating.

And business leaders feel even more optimistic about technology's impact, with 86% saying they feel positively about the changes it's bringing to their business.

As for what those changes are, 63% believe technology will enable them to overcome many of the socioeconomic changes their organisation faces, while looking at an issue that continues to hit headlines around gender diversity, 58% believe it has to power to overcome unconscious bias, for example by using more data and less judgement to create objectivity in recruitment decisions.
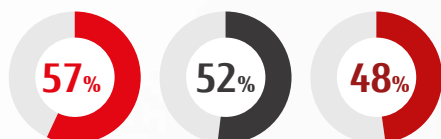
Based on these findings it's clear that many people view technology as the route to solving the world's problems, or at least the challenges they're facing in their own world.

The benefits

For members of the public who said technology is having a positive impact on society, the top three benefits cited were:

57%   **52%**   **48%**

- **Enabling new ways of learning**
- **Allowing the development of new skills**
- **Improving convenience and ease in accessing products and services**

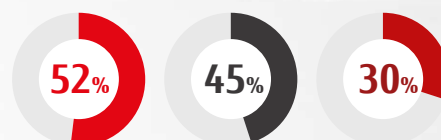For business leaders who felt the same, the top three benefits cited were:

40%   **40%**   **35%**

- **Making employees more productive**
- **Improving operational efficiency**
- **Fuelling business growth**

The downsides

Of course, not everyone we spoke to felt positive about technology's role in shaping society.

For the public who felt negative about it, the top three reasons cited were:

52%   **45%**   **30%**

- **Providing access to dangerous information**
- **Cybersecurity threats**
- **Enabling the sharing of incorrect information and fake news**

For the few business leaders who felt the same, the top three reasons were:

37%   **30%**   **25%**

- **It costs more to implement technology than the ROI received**
- **Technology has disrupted their business model**
- **Technology has displaced some team members**

The heroes and the not-so-heroic

To break things down further, we wanted to find out which organisations and industries in particular are seen to have the biggest impact.

When we asked the public to name the brands they feel have the most positive effect on society, technology firms came out on top.

Google and Amazon are seen in a positive light by 52% of the UK public, with Facebook coming in third at 32%.

It's worth noting, however, that 31% of the public also view Facebook as a negative force – perhaps driven by the recent high-profile media coverage of 'fake news' and extremist content on its platform.

As for the industry generally having the least impact, it seems banks are beginning to take a back seat.

Almost a third (31%) of UK citizens believe Barclays has no influence on UK society, while 34% said the same about HSBC.

Where technology matters most

Let's reverse things now and look at the way technology impacts particular sectors, at least in the eyes of the public.

The industries most affected by technology, according to the UK public, are:

73% **70%** **68%**

- **Banking**
- **Retail**
- **Manufacturing**

And the industries they would most like to see technology impact in future are:

40% **28%** **26%**

- **Education**
- **Transport**
- **Public sector**

As for the specific technologies the British public believe will have the most positive influence on them personally, the top three cited by respondents were:

44% **41%** **35%**
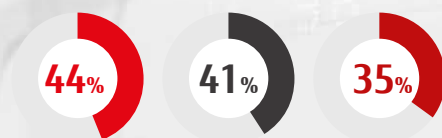
- **5G**
- **Electric vehicles**
- **Augmented reality**

And when we asked them how certain technologies will impact various sectors, their answers were equally revealing:
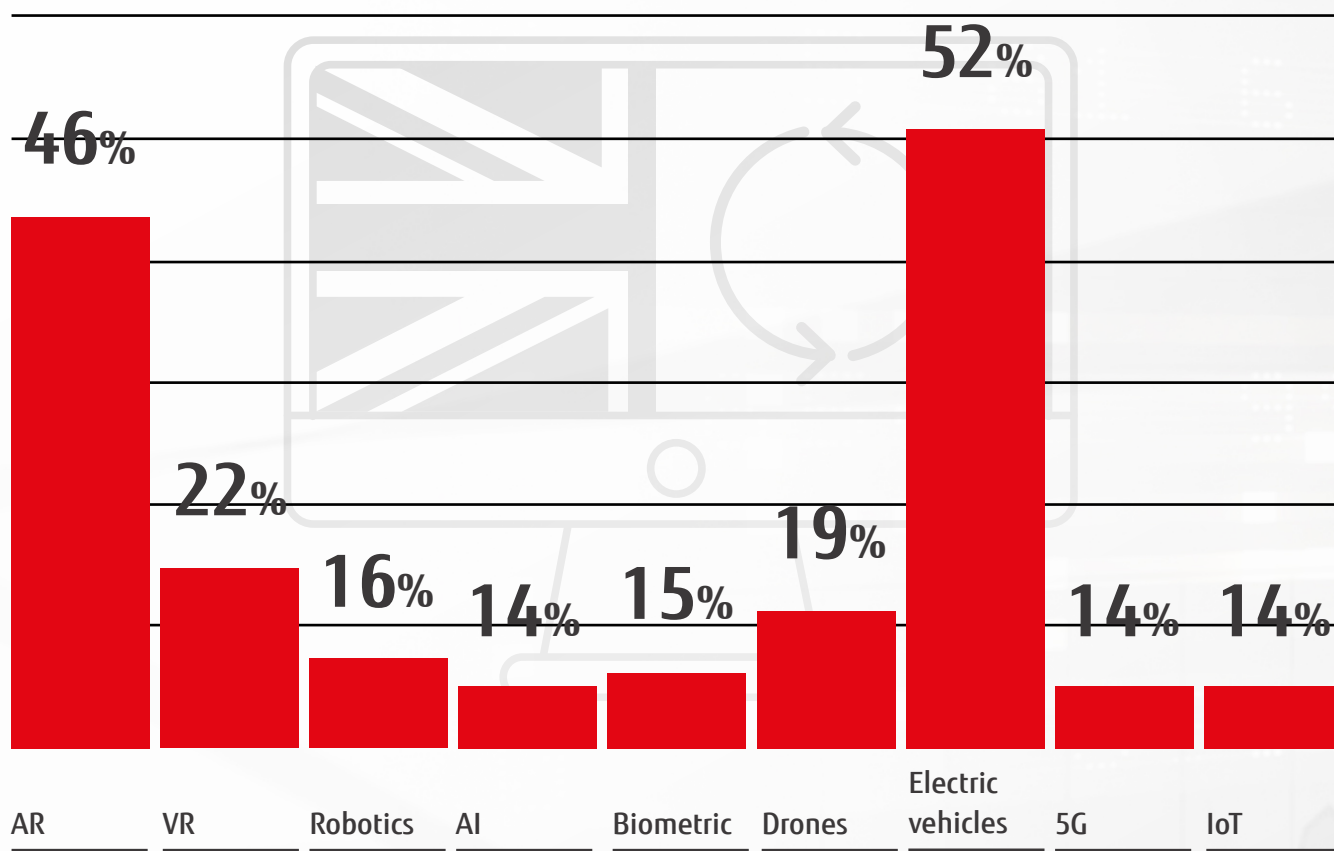
46%	22%	16%	14%	15%	19%	52%	14%	14%
AR	VR	Robotics	AI	Biometric	Drones	Electric vehicles	5G	IoT

"Many people view technology as a route to solving the world's problems, or at least the challenges they're facing in their own world."

Taking collective responsibility

Overall this research has uncovered positive feelings about technology's growing role in shaping Britain for the future.

In fact, 50% of the UK public is excited by the way technology is changing life in the UK, while 72% of business leaders feel the same about the way it's transforming their organisation.

But there are caveats here – we need not only talk but action if we are to realise the potential benefits outlined in this report.

The scale of the change ahead is so great, for instance, that 43% of UK business leaders believe their organisation won't exist in its current form in 10 years' time.

And only 37% of the public believe they're fully prepared for technology changes and have the skills to take advantage of the opportunities ahead, falling to just 23% for those over 55.

Despite recognising the size of the transformation ahead, business leaders are somewhat more optimistic than the general public.

Almost two-thirds (63%) said they feel fully prepared for technological change, while the same number are confident their employees have the right skills to make the most of new technologies.

That assuredness eased off to some extent when we asked the same business leaders to comment on society as a whole, with only 54% believing the UK is ready for a digital future.

Clearly there is some work to do in making sure Britain comes together to face the challenges ahead, and it's going to take business, government and educational institutions alike to make that happen.

70% of business leaders believe life in Great Britain has **transformed**

Different comfort zones

While it's clear the UK public is generally comfortable with the way technology is advancing, we thought it would be interesting to find out which areas of innovation they're particularly happy with and which ones they feel less enthusiastic about.

And of course we asked the same of the business leaders we surveyed.

The public

Only 21% of the general public would be happy to have their CV judged by a robot, although this did jump to 42% when we asked 16-24-year-olds.

And 35% of people wouldn't like to talk to their family using VR equipment, suggesting many are still wary about some of the potential day-to-day uses of this technology that could help it reach the mainstream.

While in the media, 3D printing is rightly seen as an exciting innovation, the public is somewhat sceptical about its practical uses, with 36% stating they wouldn't want to live in a 3D-printed house.

That said, 3D printing is something that could have a hugely positive impact on society if we can get to the stage where the general public accepts it.

41% **18%**

- **Uncomfortable being picked up by a driverless car**
- **Would put their child in one**

Driverless cars are still viewed with some scepticism too – 41% are uncomfortable with the idea of being picked up by one, and only 18% would put their child in one.

There are mixed views when it comes to technology in healthcare. While 49% of the public wouldn't want to be diagnosed by an AI doctor and only 22% would like the same from a mobile app, 43% said they'd be happy to speak to their GP through an online service like skype.
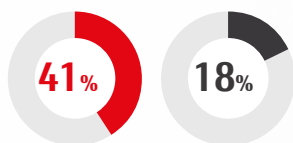
It seems then, that while people are comfortable with technology playing a supporting role in healthcare, they're not yet ready for it to replace human contact completely.

As for other innovations the public has become comfortable with, smart technologies are widely accepted, with 54% of the public saying they're happy with the use of smart technology to monitor their energy use.

The weekly shop has split opinion too. While most (37%) would happily be served by a robot in the supermarket, 35% disagree.

Elsewhere in retail attitudes are similarly advanced, with 34% saying they'd like to get their delivery from an automated machine.

And 37% of the British public would be happy to deal with an automated tax return system as offered by HMRC already. This implies that, where automation can save them time and effort, people are generally in favour, provided it's not for something as personal as a health diagnosis.

Education could be more technology-driven too, according to 44% of the public, with 50% of 33-44-year-olds – the age when people are most likely to have children in school – agreeing.

But what about the data that underpins these technologies?

Opinion seems to be divided on that front. While 34% of the public are happy to share personal data with companies and the government if it benefits them and society, 33% are not. In the shadow of GDPR, which comes into force in May 2018, this could have interesting implications.

Business leaders

When we asked business leaders about technology their organisation has already implemented, the top three answers were:

60%   **53%**   **31%**
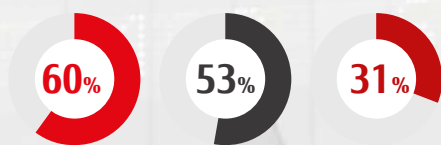
- **Cloud**
- **Data analytics**
- **IoT**

The above list suggests businesses have been working to put a solid, cloud-based infrastructure in place that will allow them to make the most of the data and increased connectivity now available to them.

When you look at what they plan to do next, however, the list moves away from these more established technologies and towards some of the innovations that are only recently beginning to take off.

When we asked about the technology they plan to implement in future, the top three answers were:

32%   **29%**   **28%**
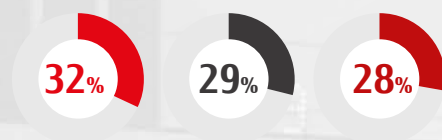
- **AI**
- **Robotic process automation (RPA)**
- **Wearables**

So which technologies are business leaders not so comfortable with?

While you'd naturally expect business leaders to be more advanced in their acceptance of new technology than the average member of the public, even the most savvy have a limit.

While 20% plan to implement drones within the next 12 months, two-thirds have no plans to do so. This may well increase quickly should UK airspace laws be relaxed – though it should be noted that it is unlikely to be eased in the next year.

And 57% of leaders have no plans to implement VR in the next year. While some amazing use cases for VR have come to light in recent years, clearly businesses aren't yet sold on its ability to provide a worthy return. We do expect this technology to be more widely adopted in future, however.

Surprisingly, biometric technology is not quite yet

on the agenda for 49% of the business leaders surveyed. Given the security and productivity benefits we've already seen it create, we would have expected this figure to be higher. That said, it remains an innovative technology which may come into its own a little later down the line – it will be interesting to look at this again in a year or two.

As for which departments are most impacted by technology, operations came out top, having been transformed by everything from AI to RPA and IoT. But what about the impact on jobs? It's often the elephant in the room when anyone is talking about workplace technology, but we wanted to hear straight from the source where businesses believe human roles could change the most.

Whose jobs will change the most?

When we asked the public which jobs most likely won't exist in their current form 10 years from now, their top three answers were:

39%   **36%**   **35%**
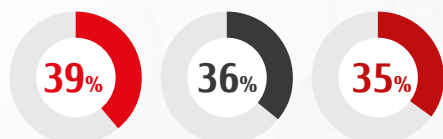
- **Bank teller**
- **Shelf-stacker**
- **Shop assistant**

Interestingly, the above list almost exactly reflects the views of employers.

When we asked business leaders the same question, their top three answers were:

37%   **26%**   **25%**
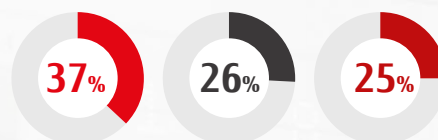
- **Bank teller**
- **Shop assistant**
- **Shelf-stacker**

It seems, then, that those working in retail roles have the most to be concerned about. Although it's worth reiterating that the question was around which jobs would not be the same, not which ones will be gone altogether. Where some tasks will be taken on by technology, we'd expect others to be created.

We should also note that 9% of business leaders believe their own job is at risk.

"There is some work to do in making sure Britain comes together to face the challenges ahead.
It's going to take business, government and education institutions alike to make that happen"

Conclusion

Reviewing our research in full, we reached the following three conclusions:

1.

Technology is transforming society

We can make that statement with no hint of hyperbole.

Our research clearly shows that both the public and business leaders believe technology is one of the biggest drivers of change in Britain.

If not the biggest.

It no longer exists in isolation. Today it underpins everything we do in our working or private lives. And every time we discover a new way of doing things, it's technology that makes that happen.

This is something those of us in the technology space have been saying for many years now, but this research confirms it without question.

2.

The UK public needs more guidance and reassurance to get on board with technology innovation

While the above is exciting for people who already understand and are optimistic about technology, many people are still unsure about certain innovations.

They are comfortable with certain aspects of transformation – automating their tax returns, for example, or introducing technology into the classroom. But when the changes move further away from what they're used to – driverless vehicles, for instance, or houses built by 3D printers – they become somewhat less comfortable.

This doesn't mean people won't accept these technologies eventually. But it does mean technology providers need to work harder to educate people on the massive benefits these innovations can bring in the long run.

3.

All of us must work together to realise technology's potential

The tired cliché goes: "With great power comes great responsibility."

But cliché or not, the truth is technology companies do have a lot of power at their fingertips.

They are fundamentally changing society, impacting everything we do in business and our personal lives. They hold all the cards when it comes to what our future will look like.

If we want to build the best possible society, then, those technology companies must use their power responsibly.

But they can't do it alone. And nor should they have to.

For the UK to truly realise its potential, everyone – from technology innovators to educators and government departments – must co-create and collaborate to build a better future for all.

Methodology

Data for this study was gathered from 2,145 members of the UK public and 647 senior business decision makers from across financial services, retail, manufacturing and public sector organisations. Organisation size varied, with approximately 60% of respondents are from large businesses (250+ employees) and 40% from businesses under 250 employees.

Research was conducted by Censuswide, an independent survey consultancy, with respondents taking part in online interviews during September 2017.