



2020

DIGITAL TRENDS

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INTRODUCTION

Predicting key trends has, ironically, become a trend in itself – one that, year-on-year, is growing in strength. Terms like augmented reality, blockchain and machine learning recur continually – and often raise eyebrows. But these are such complex technologies that their technical and commercial capabilities evolve each year, and their potential is still to be fully realised.

These innovations should rightly be on everyone's radar but, for our 2020 trends, we are going to focus on the human element of digital – exploring how tech is evolving human behaviour. We'll discuss the key digital themes that have become a bi-product of the technology and innovation the digital industry loves to talk about.

In this report, we'll explore **Digital Wellbeing** – a subject that's being acknowledged as a key reaction to our relationship with technology.

We'll take a closer look at **Digital Privacy** and **Digital Truth**. In recent years large companies, previously considered as 'trustworthy', have failed to protect their consumers' personal data. How can brands ensure the technologies they're using don't pose a threat to digital privacy? And how can brands build digital trust in a world that lacks authentication and verification methods of content?

We'll examine the topics of **Digital Skills** and **Digital Ethics**. We live in an era where technology adoption is rising exponentially, so how do companies, the government, and the digital community prepare the workforce to succeed in the digital economy? Should we be creating employment opportunities in digital ethics to challenge the moral obligations of new technology innovations, and if so, how do we build a coherent framework we can all agree on?

Focusing on five key trends that are shaping the digital ecosystem, this report is a fantastic opportunity to challenge how we design, build and implement digital solutions, without overlooking what's most important – the human element.





DIGITAL WELLBEING

Our addiction to digital technology has reached its apex. Already in 2017, addiction to smartphones was out of control, with new terms such as 'smombie' or 'technoference' emerging to describe the detrimental impact of mobile phones, brilliantly described in a TED talk¹ by our CSO Ross Sleight. And it seems the addiction hasn't gotten any better. The average UK² adult spends 2 hours and 34 minutes daily on a smartphone. In the US³, this rises to an astonishing 3 hours and 43 minutes. On average, we check smartphones every 12 minutes⁴, and it's not just millennial behaviour. Gen X (born 1965-1979) spend more time on their smartphones than those currently in their 20s and 30s, and 76 per cent of smartphone-owning baby boomers (born 1946 - 1964) use the internet 'at least several times per day'⁵.

And while many are in denial - with four in five⁶ smartphone users thinking their personal usage is below the national average - the truth is staggering. Our phones are never more than a metre away from us, and every vibration or noise immediately captures our attention.

A growing number of users are now considering the harmful impact of mobile, and social media in particular. **Six in ten** millennials⁷ said reducing time on social media would make them happier, and 64 per cent that it would make them physically healthier. This is why the new concept of 'digital wellbeing' has been gathering pace over the last few years. As a key driver of addictive behaviour, social media has been designed to exploit some of our core psychological needs - to belong, to have a sense of connection, to feel appreciated, to tickle our self-esteem. Its addictive properties are based on immediacy - activating the reward path in our brains to deliver moments of dopamine; instant gratification, with infinite scroll features further deepening the psychological dependency through repeated cycles of uncertainty, anticipation and feedback (a tactic also used by casinos⁸).

6/10 millennials believe reducing time on social media would make them happier

There's a shared responsibility that falls onto the companies designing and building apps and user interfaces, a responsibility that also extends to policymakers and the users. Pursuing effective digital wellbeing should be the norm, and the shared vision should go beyond narrowly categorising this into 'reducing screen time'.

Apple's iOS 12 software update focused strongly on this theme. Google produced informative guides to educate users. And Instagram trialled removing likes⁹ to temper the addictive patterns. Ultimately, these features are targeted at boosting productivity, empowering users to manage their screen time and promoting healthier relationships with mobile phones. But these are not enough on their own, and time spent on devices continues to increase¹⁰.

Digital wellbeing will be exceptionally important for us all to consider - we need to have empathy with our users as we design new products and services. We need to create experiences that, at best, promote a healthy relationship with the digital world; and at worst - not hurt customers' wellbeing.

We must remember, however, that wellbeing covers a much broader area of everyday life, with digital services having a big impact on the personal, social and mental wellbeing of users. Many popular services nowadays have been built using addictive design patterns, playing on our psychological fears, forcing us to always be 'on'. Dark patterns¹¹, as an example, are tricks that steer user behaviour towards a certain action, such as buying things we didn't want, giving an answer we didn't intend or subscribing to a paid service we didn't mean to. Something many of us have dealt with is 'Forced Continuity', when your card gets silently charged with no warning when a free trial comes to an end.

“Pursuing effective digital wellbeing should be the norm, and the shared vision should go beyond narrowly categorising this into reducing screen time.”

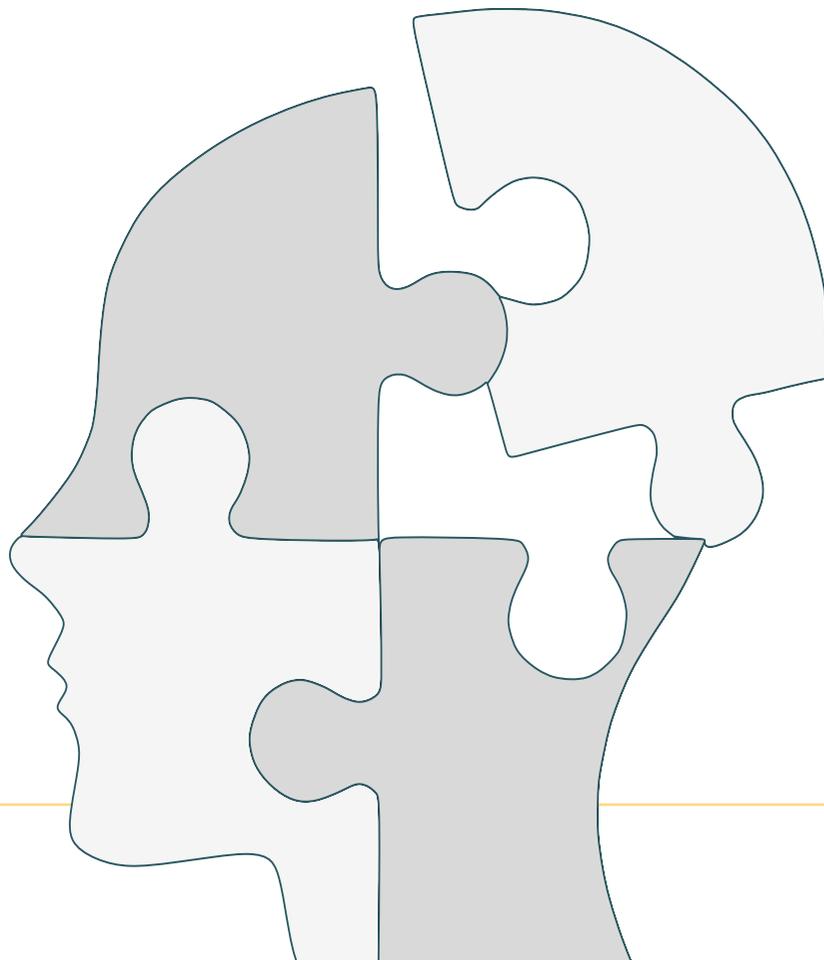


Building digital products must be about more than simply satisfying needs in our consumerism-driven society. Design practices have often focused too heavily on the consumer output, with UX seen as a means to deliver business value. But the industry should instead create designs that support the wellbeing of users.

Governments and brands have often used behavioural economics theories, with practices such as nudges, to steer consumer decision-making towards positive choices. The prevalent use of addictive patterns – primarily exploited to help companies drive usage, boost engagement or revenue – is not acceptable given the collateral damage to society and the individual.

So, how can we – as designers, developers and brands – make things better? Challenge yourself to answer the following questions:

- **What tools can you implement to support digital wellbeing?**
- **What addictive patterns have you built and how can you deconstruct these?**



DIGITAL PRIVACY

Data has become the most valuable resource of the 21st century, so to speak. But as with anything valuable, there is an opportunity for exploitation – the recent case of Travelex¹² being held to ransom by hackers demanding sensitive customer data is a prime example.

The amount of digital data being created every minute is accelerating exponentially. Experts predict that, by the end of 2020, there will be 40 times¹³ more bytes of data than all the stars in the observable universe. Take Facebook – if you're a user, even an infrequent one, download your profile¹⁴ to see the magnitude of information collected from your messages, photos, comments, and likes. This slightly terrifying exercise is one that very clearly portrays why digital privacy is so important – and why tech giants are being scrutinised¹⁵ for their approach to user privacy and data monetisation.

Without delving any deeper into the landscape where companies too often exploit data for their own business gain, we must remember there is more to the story. Data is a powerful tool and – if collected with consent, protected, and transparently utilised – it can be massively beneficial not just to the company, but also to the user.

Users effectively trade their data in return for convenience, personalisation, better user experiences or time-saving benefits. They typically feel comfortable allowing access to basic personal identifiable information to increase the personalisation of an app or a website, but there's a limit to what they're prepared to hand over.

New regulations such as GDPR in Europe and CCPA in the US are now enshrining the fact that personal data collected by businesses belongs to the customer – not the businesses. This clear mandate that customers own their data (whether they want to or not, it must be stressed) should lead to increased data transparency – something companies must not only be prepared for but should fully embrace. Companies must be clear why data is being collected, what will be done with it and what customers will get in return.

By the end of 2020, there will be 40 times more bytes of data than observable stars



Lastly, the accountability of businesses storing, processing and moving user data must improve. Data breaches are extremely damaging, yet surprisingly common. It's clear that data is not being stored securely enough, and if you look at this infographic¹⁶ – you'll see the worrying prevalence of systems that have been built without the right security in place. Take a look at 'Have I Been Pwned' website¹⁷ to check your own data integrity. It will let you know if your email address has been affected by any data breaches in the past.

The continued rise of new technologies such as the Internet of Things (IoT) or facial recognition poses a real threat to cybersecurity – nowadays, anything that has a microphone or a camera poses a real risk to digital privacy. Global brands like Amazon, who have a huge product line based around IoT, have shown to be vulnerable to data breaches and misuse of the technology in their products. Their security device, Amazon Ring, has been subject to data leaks¹⁸ of customers' information and hackers taking control of the device.

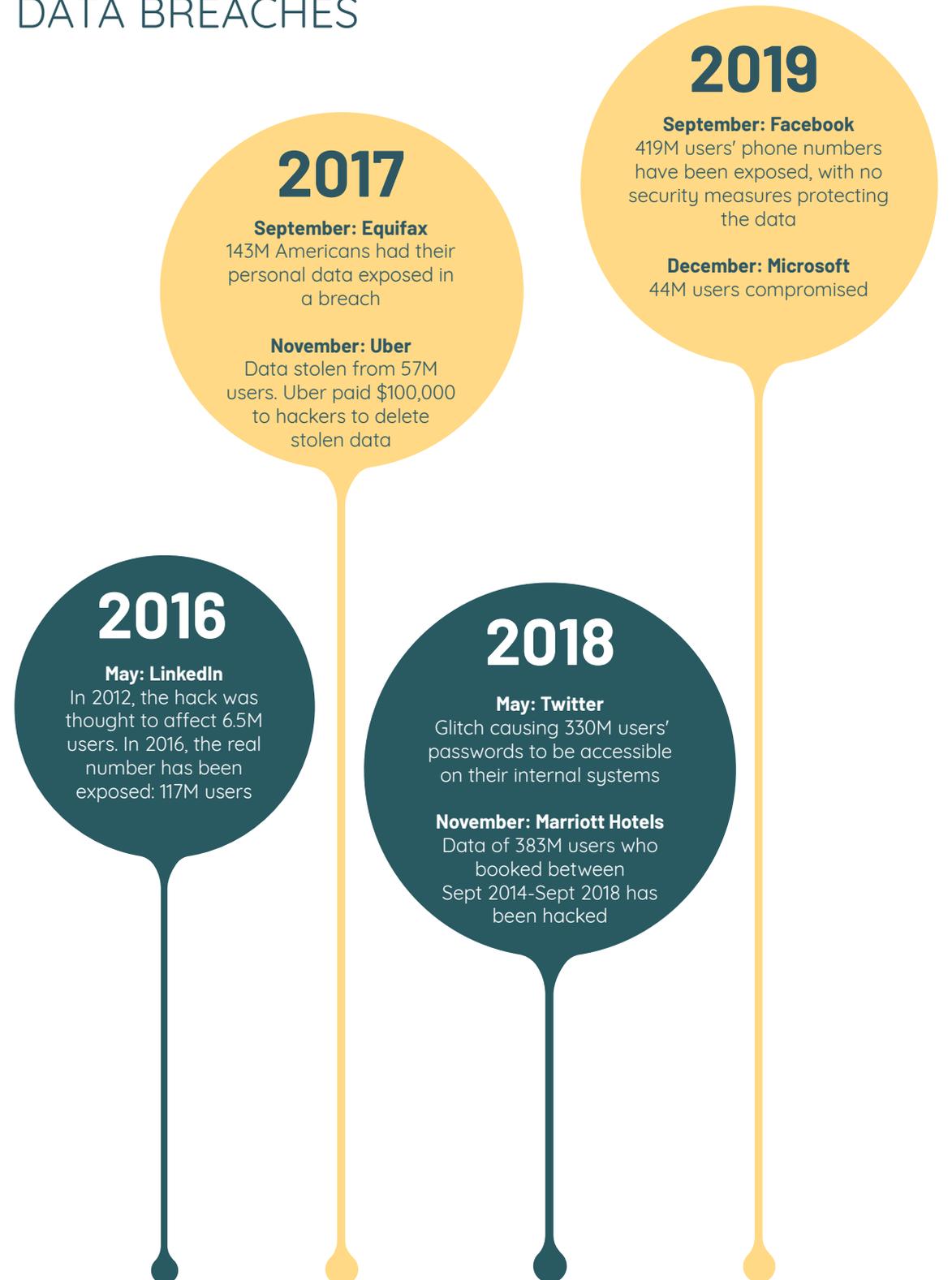
In an attempt to develop customer experiences, Alexa-based devices have been recording and uploading some of the conversations you have to the cloud, irrespective of the wake command. The biggest red flag is that teams at Amazon analyse¹⁹ parts of these conversations, and none of it is strictly anonymised. If devices cannot be secure from the point of manufacturing all the way through to the consumers' hands, it exposes vulnerabilities²⁰ to the entire network of that device.

It's no surprise that consumers are becoming more data conscious, with research showing users are now much more concerned with online privacy than they were a year ago (up by 43 per cent in the UK)²¹.

One thing to remember is that the frameworks of digital privacy should be built upon trust and transparency. Delivering real product differentiation, solving real customer pain points and building an open forum with the community that fuels your business are stepping stones towards nurturing digital trust.

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SOME OF THE RECENT DATA BREACHES



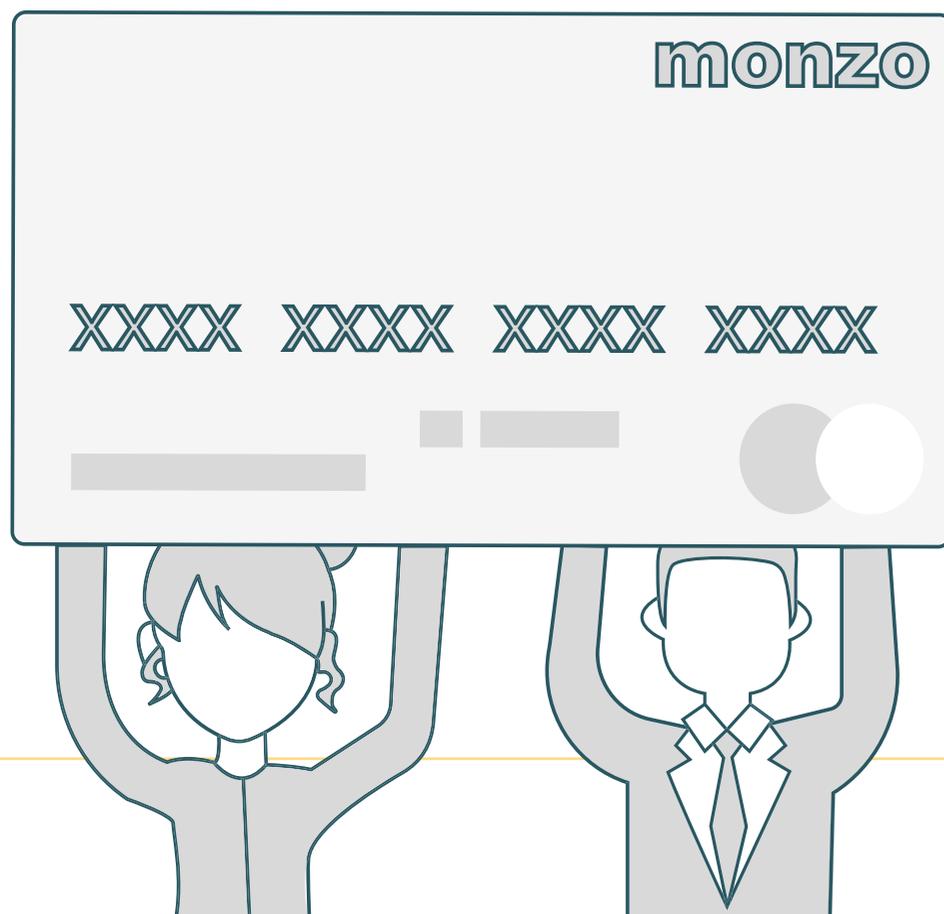


A company that stands out for its transparent response to a large data breach it had recently suffered was the digital bank, Monzo.

In August 2019, Monzo reported that up to **500,000** of their customers were affected by an internal breach, as PINs were wrongly being stored on Monzo's internal systems. They rolled out software updates immediately and deleted any wrongfully stored data. Just a few days later, they released a blog post openly detailing the breach and fixes²². Through this transparent communication and the trust they had previously built up, the repercussions for Monzo were far less substantial than breaches experienced by some of the big legacy banks.

As consumers are becoming savvier about their data, we expect 2020 to see a greater adoption of regulations and tools to educate and manage users data. So, the questions you should be asking yourself are:

- **What steps should you be taking to build transparency and win consumer trust?**
- **How do you move from a legal compliance for new data regulation to a pro-consumer stance in your product strategy?**
- **What is your customer product and communications plan in the event of a data breach?**



DIGITAL TRUTH

In the earlier years of the internet, web protocols had evolved to allow users to publish information that could then be found via search engines. But, fast forward to today, and anyone can publish content instantly from any device. As the authentication methods for platforms, publishers and customers are limited, digital trust becomes key.

One of the latest AI-based technologies, 'deepfakes', has brought digital trust to the forefront of media attention. The technology is using artificial neural networks and machine learning techniques to manipulate the existing media of one person, and superimpose it over media showcasing another person – creating completely fabricated images, videos and sounds. Naturally, this could be extremely detrimental in political campaigns, for example, where reputation and trust are key to voters' decision-making process. This would only be amplified in situations like echo chambers, a metaphorical way of describing a closed system that reinforces any predetermined beliefs.

Facebook's AI division recognised the lack of verification methods online to detect deepfakes. They released a statement²³ saying they will remove any manipulated videos from their platform, and have been investing in AI research and development. They also set up a challenge²⁴ to deliver

publicly available technology solutions that can be used to determine the legitimacy of information presented online.

Many of these topics around data breaches, illegal surveillance, lack of transparency and so on can have a profound effect on a company's reputation. In a recent Deloitte survey²⁵ **nine out of ten** Americans stated business transparency is more important today than ever before.

The goal for brands is to invest in transparent customer experiences and develop trustworthy relationships, as these can ultimately be more important than the product itself. Privacy, transparency, truth, security, control and ethics are some of the many foundations for building digital trust. A few questions worth considering:

- **Do you support the accessibility of data across your platforms? And can users easily digest policies and other terms and conditions?**
- **Are you truthful about how your products are presented and do you use explicit language to convey what product or service benefits are gained by submitting information?**



DIGITAL SKILLS

Digital transformation continues to be one of the most important issues facing boards, regardless of industry. Digital transformation has two distinct goals; to improve current operational effectiveness across all aspects of the organisation, and to drive greater revenue through embracing technological innovation being adopted by customers in both existing, and new products and markets.

Digital transformation enables crucial differentiation versus competitors, and ensures ongoing proposition relevance versus new players entering the market. But the success rate isn't the same for all companies, as many lag behind or fail in their digital transformation efforts. Forrester²⁶ surveyed 1,600 businesses to learn about the state of digital transformation across Europe and North America. **56 per cent** believed they were transforming, but Forrester's deeper analysis revealed their scope and investment told a different story.

Digital transformation is a continuous process and investment, not a single one-off project, and delivering change is incremental over time. Many businesses focus on implementing new technologies ("Products") and redefining internal systems ("Processes") – two crucial pillars of any successful change programme. But it is the cultural transformation that is often overlooked.

Cultural change encompasses everything from moving from a command and control organisational structure to a more agile organisation, through to the training and reskilling for employees to take advantage of digital opportunities. By acknowledging the importance of this cultural transformation, eliminating silos and establishing a cross-functional and collaborative approach, the potential of achieving success is greater. Businesses must create a working environment that's comfortable with change, as without this, new products and processes will be rejected or poorly implemented.

“ To stay competitive in the ever-evolving digital world, workers must have the skills for today, and tomorrow, coupled with the right attitude to easily adapt in a fast-paced world. ”

Those who are running digital transformation or launching new digital ventures can face many challenges in understanding what kind of technology is right for their company, which digital skills employees will need to learn and how they can create and manage a culture of change to respond to customer needs more proactively.

Gen Z and millennials have an advantage of growing up in a digital world, easily navigating the latest devices from an early age. But, for older generations in particular, there is a strong demand for professional development and digital training to keep in line with the growth of technology – and with a culture of rapid change. In larger corporations, culture is often based on a highly hierarchical structure, so reskilling the whole company and building an open, transparent and agile culture will take a lot more time and require a willingness to change; especially with so much red tape in the decision-making processes.

As we move into the next phase of globalisation, many jobs are likely to be replaced by automation and other technologies to create greater operational efficiencies. Mitigating the human cost of this displacement will require a lot of investment from both the private sector and government to keep the costs low and provide enough opportunities across all industries.

McKinsey & Co²⁷ released a detailed report analysing the future of work in America, highlighting the polarisation in the workforce caused by automation,

especially between those who have a higher university education and those who began work after high school. Retraining the workforce to learn new digital skills, moving them into new roles and offering learning programs will be critical for companies considering automation.

To stay competitive in the ever-evolving digital world, workers must have the skills for today, and tomorrow, coupled with the right attitude to easily adapt in a fast-paced world. In 2018, a study²⁸ suggested up to **80 per cent** of employees felt they lacked skills for their current and future career paths. And while a large responsibility falls to HR and IT departments – it's business leaders that must ensure the seamless transition towards a digitally-enabled workforce.

- **What processes are you setting up to assist with digital transformation?**
- **How can you set the foundations of creating an open, agile, collaborative culture?**
- **What digital skills are you going to prioritise as you look to reskill your workforce?**

Only 20% of employees have the right skills for their current and future career paths



DIGITAL ETHICS

With so many new possibilities in this growing digital economy, the industry must prioritise ethical frameworks during all phases of product design and development. One of the biggest hurdles we face is learning how to connect empathy, humanity and morality with technology.

Moral principles are something we all try to live by, but as we move into the 'fourth industrial revolution', how do we rightly construct a set of rules for digital ethics? Let's look at surveillance. GCHQ in the UK collects, aggregates and analyses data on members of society. Now, although this doesn't directly invade our privacy, it is paramount in maintaining national security. But when links can be formed between information and identity formation²⁹, for example using data on an individual's spending habits to build a digital profile – it should raise some moral questions.

An extreme case of this is witnessed across China, where surveillance technologies are being embedded to track much of the Chinese society. **Eight out of ten**³⁰ of the most surveilled cities are in China, and although the key motive is to disincentivise bad public behaviour and create a safer society, many argue such use of technology is suppressive and dystopian. The lack of control is the key issue – what are the boundaries we must set to create a fair and safe environment, not one built on fear and penalties?

“

One of the biggest hurdles we face is learning how to connect empathy, humanity and morality with technology.

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'Dark advertisement' is another digital ethics area worth discussion. It's used to target or discriminate against groups of people based on race, religion or gender. If used correctly, these targeted ads can be positive, helping users receive relevant ads based on their spending behaviour. The alternative abuses the opportunity to target a specific group of people, with an intention to mislead or manipulate them.

Digital ethics extends across many areas. One that's gaining popularity is machine learning bias. Recently, Google's AI algorithm meant to monitor and prevent hate speech on social media has been discovered to be biased against African-Americans³¹.

If the machine learning algorithms are based on software developers' own biases and faults, how can we hope to achieve artificial intelligence that's truly ethical? Through its vulnerability to bias, discrimination, denial of accountability and social isolation, machine learning and artificial intelligence must follow a vigorous interrogation against the ethical standards – have a set of governance processes in place to unlock accountability, and be subjected to continued evaluation and iteration.

Should dark patterns in design be penalised, given that apps and websites are often designed to exploit psychological triggers and human's addictive tendencies? Should sentient machines have rights? And should facial recognition technologies be able to operate without consent? The industry must decide on the ethical considerations that should be put in place to protect consumers when introducing new technologies. Who and how will we govern and define a framework that we can all agree on, is something to think about.

Challenge yourself to answer the following questions:

- **Is there a room for an ethics role to be created within your organisation?**
- **How can you, as a business leader, ensure your processes and technological solutions are ethically designed?**

Google's AI algorithm has been found to be biased against African-Americans

CONCLUSION

In this report we touched upon a number of very different digital themes – themes that we believe will have a massive impact on businesses and customers alike. Central to all of these trends is a need for empathy in our digital product design, development and operations.

Our key priority should be building a digital ecosystem that promotes positive relationships with technology, is ethically considerate, protects user data, and most importantly, cares about its users. Creating digital products focused solely on meeting internal business metrics to the detriment of our users is no longer an option. We have a moral obligation to deliver products that have users, and their wellbeing, at their core.

As digital technology evolves, the discussion around these themes will continue to grow – and every one of us, whether designers, developers, business leaders, innovators or policymakers, has a role to play in shaping a positive, empathetic digital world that we will all want to be part of.

Today, the digital monopolies (Google, Facebook, Amazon, Alibaba, Tencent, and others) will have the biggest influence on the evolution of these trends, so keep an eye on developer conferences and product releases which will give an idea of their trajectories over the next few years.

Further research, user testing and investment will be required to fully comprehend the long-term ramifications and potential these trends will have on shaping better digital technology frameworks. But the revolution has already started, and the industry has to act to evolve it further. Brands that proactively adopt these principles early on will win the customers over – and help deliver a new, better way of ‘doing digital’ – with customers at the heart of the entire process.

At Somo, we actively create for an empathetic digital world and the evolution of human-centred design. If you want to discuss any of the topics covered in this report in more detail, or find out how we can help you build a more positive customer-centric product, please get in touch.



To find out more about how we help brands transform their customer experiences and drive positive change, please contact Rebecca Crook, Chief Growth Officer.

Email: rebecca.crook@somoglobal.com

All data sources can be found at:
<http://bit.ly/somoDT20>



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