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— Introduction

Our annual Trends report is here, born from plenty of Post-it notes, more coffee than we care to mention, lots of healthy debate and quite a few laughs. Trends is always a labor of love, crowdsourced from Fjordians (all 1,000 of us) from around the world – from San Francisco to Berlin, Hong Kong to Johannesburg, Dubai to São Paulo and 22 other places in between. This process results in the trends we expect to affect business, technology and design in the year ahead.

Today, we stand at a technological, political and environmental inflection point. Two decades of rapid technology growth and innovation have generated enormous physical and digital clutter. The steep demand on the planet's resources mirrors

the demand on two other precious human resources – our time and attention. As a result, employees, consumers and organizations are doing some serious soul-searching about where they stand with it all, which leads us to our meta theme for 2019: the search for value and relevance.

Value and relevance

Digital is now so widely adopted that its novelty has worn off. We are at an innovation plateau – a flat point in the S-curve before new products and services become mainstream. Some will be powered by artificial intelligence, such as hyper-personal Living Services; others will be driven by a shift to the circular economy and new cultural norms around data, identity and well-being.

Digital is facing a big spring-cleaning: a time when we decide whether something still has value and relevance to our lives. This is a question about the long term, not just the sugar high of instant gratification.

As you read through the Trends, you will see that they raise plenty of fundamental questions. Does the brand deserve a space in my life and in the world? Is the value exchange two-way? Is it doing something more than straining the planet? If the answer is no, then unsubscribe or delete. It has never been easier to do so.

The plateau is an opportunity, though, to get our houses in order. Once the pace picks up again, the winners will be organizations that navigated

the shift from monoliths to ecosystems, providing hyper-relevance to people and going beyond the labels of customers, consumers, commuters and citizens.

Success lies in providing value relevant not only to individual contexts, but also to the world. This requires a mindset shift that feels counterintuitive: Be quiet, don't shout. Be relevant or don't be there at all. Know your customers, but only on their terms – not yours. Do less, not more.

Value creation will not come from simply growing bigger, but by being better. In busy lives and on a crowded planet, only the relevant will remain.

Happy reading!

Silence is gold⁰¹



We're seeing a dramatic escalation in the rate at which people disconnect, unsubscribe and opt out to stem the barrage of content and messages that clutter daily life. As consumers, we've come to realize that it's no longer simply a lifestyle choice, but a serious mental health issue. As we put up more barriers between ourselves and digital technologies, organizations must learn how to offer value to users who crave quiet in a noisy world.

— What's going on?

We predicted Digital Dieting back in our 2015 Trends, which looked at how our behaviors were evolving because of the growing tension between our reliance on digital and our need to focus on the unmediated real world. In 2018, the rise of alerts, notifications and voice services built on this thinking, directing our attention toward fears that digital technologies could have a lasting negative influence on our mental health, especially for children.

A diverse array of organizations from around the world have voiced their concern. In October 2018, the first ever Global Ministerial Mental Health Summit discussed ways to address the damaging impact of digital technologies, and the British government recently asked medical experts to draw up guidelines for children and young people's social media use to protect their mental health. Kids themselves are also pushing back. More than half (63 percent) of British schoolchildren now say they would be happy if social media had never been invented, and half of the UK's Generation Z – a group that grew up online – have quit or are considering quitting at least one social media platform.

Arguably the most enlightened about the risks for children, Silicon Valley parents are increasingly obsessed with keeping their kids away from screens – so much so that many are changing their nannies' contracts to include a promise to hide phones, tablets, computers and TVs. There's also a divide born of privilege and wealth that is revealing in itself: Research shows lower-income American teenagers spend an average of eight hours and seven minutes per day using screens for entertainment, while their more affluent peers spend five hours and 42 minutes. And as China makes efforts to tackle gaming addiction, especially among children, gaming giant Tencent is tightening checks on the age of online players.

On the employee side, China's Hangzhou Zhongheng Electric Co., Ltd., is one of a growing number of organizations using brain surveillance devices to help them redesign workflows with the aim of reducing employees' mental stress.

Perhaps most striking has been the backlash within the tech industry itself. The Center for Humane Technology (a group



Worker wearing brain monitor for research into stress.





of Silicon Valley technologists who were early employees at big tech firms) is now so alarmed by the ill effects of social networks and smartphones, it's working to build awareness of the danger of technology "hijacking our minds and society" and our need to realign technology with humanity's best interests.

The growth of recovery programs for digital technology addicts and "right to disconnect" laws designed to create boundaries between work and home put further pressure on tech giants, which are rightly responding by redesigning user experiences around the principles of control and restriction.

Apple and Google have introduced well-being tools that limit screen time. Meanwhile, Microsoft has increased product features to minimize distraction, and alongside tech companies like Amazon and Cisco, it's backing Mindful Technology, a business focused on developing technology with respect for people's time, attention and privacy.

Beyond user experiences, companies are also designing physical products that give the user more control over their

exposure to digital technology. The Light Phone, for example, is a minimalist smartphone designed to reduce daily mobile use. There's clearly demand for such endeavours: When entrepreneurs Ivan Cash and Scott Blew launched their Kickstarter campaign for screen-blocking IRL Glasses – spectacles that blank-out the light wavelengths from LED and LCD screens – they surpassed their funding goal in just three days. There are even 12-step recovery programs for social media addiction.

All-capable devices with screens have made us distracted and depressed. It's perhaps inevitable, therefore, that simpler, less attention-seeking tech is enjoying a resurgence. In 2018, Sony brought back its 25-year-old PlayStation Classic, and PDA pioneer Palm Inc., creator of the iconic PalmPilot, was reborn.

The values users seek from the products, services and organizations we choose to interact with are shifting. Where once we celebrated novelty, excitement and instant gratification, we now reject organizations that shout to get our attention.

— What's next?

Mindful design is fast rising up on the agenda for big tech firms. Other organizations must follow their lead but, to do so, they'll need to learn new ways to build relationships and loyalty with consumers that now respond badly to the shouty approach of old.

Rather than being big, bold and noisy, to avoid being ignored – or worse, abandoned – organizations need to pipe down. It'll be difficult for many to break long-established behavior, but it's crucial. Their focus should be on designing products that meet customers' holistic needs, shaped to sit favorably within the ecosystem of other products competing for attention. They'll also need to rethink the metrics they use to measure success, prioritizing long-term value, for example, above usage time.

In 2017, we talked about Unintended Consequences – specifically, organizations' need to focus more closely on their social experience (as well as customer and employee experience) to remove or mitigate any unintended consequences of their actions.

In 2019, the unintended consequence of organizations' activities will be customers feeling inundated and overwhelmed; organizations must embrace a new design ethos that puts human value back at the center of their innovations. The designers who undertake this work have a responsibility to take a more ethical approach by not making things people don't need. Think of it as the Hippocratic Oath for designers.



Families are realizing the value of reduced screen time and less digital noise.

“More than half (63 percent) of British schoolchildren now say they would be happy if social media had never been invented.”



“The move toward “slimline” digital consumption will only get faster.”

We should also consider how best to design to exploit boredom. As Manoush Zomorodi has argued so eloquently, boredom breeds thought that leads to ideas and creativity that can be put to great use. By building opportunities to pause and think into the paths and interfaces they develop, organizations can turn users into proactive, engaged and genuine partners in this digital mix.

The move toward “slimline” digital consumption will only get faster. Customers will define their own boundaries, and these may vary as they move from place to place – for example, they might interact

more with digital at work than at home. To strike the right balance, organizations will need to take a holistic view, including other products, services and users.

Consumers want to be heard and understood as whole people, not simply as receivers of isolated services. It will be critical for all organizations to consider not just their own product but the wider ecosystem in which their product sits. It’s this consideration and respect for individuals’ context that will become the pillars of the long-term, value-added, meaningful relationships on which organizations’ future business success will depend.



—— Fjord suggests

01

Be quieter

Take a lack of responsiveness as a hint to be quieter, not noisier. Rethink your metrics, and find new ways of measuring performance of your services that are not purely engagement-related.

02

Radically simplify your feedback surveys

Listen to the changing needs of your customers and make providing feedback as easy and instant as possible. Pay attention to the online reviews – customers are probably already telling you what you need to know.

03

Invest in content design

When the number of interactions you have with your consumers is minimal, each one of them counts. Change the language of your messaging, and do it frequently. It's not just about what you say but how you say it.

04

Measure the cognitive effort that you expect from your customers

Recognize the attention and effort your service expects from its users and demand it only when it's useful to people.

The last straw?⁰²



Our climate is changing and so is the way we're thinking about it. Our concerns about global warming, pollution and sustainability have experienced a cultural shift. Where once it was "too big to do anything about," now it's personal. In 2019, it won't be enough for companies to simply acknowledge environmental concerns; consumers will expect commitment to be proven through action. Organizations will need to redesign their systems and business models to fit the "circular economy," where consumers are active participants, and sustainability is built into their products and services.

What's going on?

In 2018, people's growing anxiety and anger about the environmental impact of plastics was vented at the worst culprits. The sources of single-use shopping bags, bottles, coffee cups and drinking straws were held to account by the public and mainstream media. Collins Dictionary even made "single-use" its word of the year, saying that it describes "items whose unchecked proliferation are blamed for damaging the environment and affecting the food chain."

Last year, we highlighted the rise of the Ethics Economy, with more organizations taking political and ethical stances that are above and beyond their own bottom line concerns. In the 12 months since, the environment hasn't left the headlines. A series of extreme weather events were partly blamed on climate change. China stopped importing and disposing of international waste as it couldn't cope with any more. And horrific scenes of plastic strewn

oceans on David Attenborough's "Blue Planet II" TV series fired up the public and media debate on single-use plastics.

In September, California became the first US state to ban the use of plastic straws in restaurants, unless customers ask for them. In England, where 4.7 billion plastic straws, 316 million plastic stirrers and 1.8 billion plastic-stemmed cotton buds are used each year, the environment secretary launched a consultation into the proposals to ban plastic straws and cotton buds within 12 months. Then in October, the European Parliament voted for a complete ban on a range of single-use plastics across the union by 2021.

Considerable attention is being given to microplastics, tiny pieces ranging from 5 millimeters down to 100 nanometers in diameter. They are now found throughout our oceans, working their ways into the creatures that inhabit them, the food chain and ultimately, our bodies. In one recent sampling survey



The types of waste that plague our oceans – a visual guide created by Making Oceans Plastic Free.



conducted in 21 countries in Europe, the Americas, Africa and Asia, microplastics were found in 90 percent of table salt. Microplastics were also found in human stool for the first time in history in 2018.

And British and US scientists are engineering an enzyme that eats plastic, a major breakthrough in the fight against pollution.

Most countries are now working to define national strategies for their transition to a circular economy, a move which could bring an estimated savings of £523 billion for European companies alone. Applying circular economy principles at scale in China's cities would deliver significant benefits, according to a report launched at the World Economic Forum's Annual Meeting of the New Champions in October. It would make cities more livable and goods and services more affordable by reducing emissions of fine particle matter by 50 percent, greenhouse gas emissions by 23 percent and traffic congestion by 47 percent, by 2040.

Consumers aren't just receptive to change, they now demand it – as illustrated by a groundswell of industry-wide and company-specific initiatives. The Ellen MacArthur Foundation has organized a pledge whereby 250 companies, including

PepsiCo, Unilever and H&M, will team up with governments to boost recycling and end the flow of plastic into oceans.

In fashion, Make Fashion Circular is driving collaboration between industry leaders and other key stakeholders. It aims to create a textiles economy with new business models that increase the use of safe and renewable materials and turn old clothes into new.

Everlane recently debuted a collection made from recycled plastic bottles. H&M is working toward shifting from its current linear model to one that is 100 percent circular and renewable by 2030. It is building circularity into every stage of the value chain, including the products designed and made, the materials and processes used, and how customers care for and dispose of them.

Nike has undergone profound change, helping to lead the way on sustainable design and materials. Their Flyknit shoes reduce waste by about 60 percent. Meanwhile, Ikea is working towards being a net exporter of renewable energy by 2020.

To reduce waste and litter, city marketing organization Amsterdam, designer Explicit Wear, and sustainability company

Gumdrop have collaborated to design a shoe called Gumshoe, which is made from gum scraped off the streets of Amsterdam.

In tech, at the launch of the iPhone XS, Apple announced that all its facilities are running on 100 percent renewables — a huge piece of news that would not have been a consideration 10 or even five years ago. And many Apple suppliers have now signed a pledge to get to 100 percent renewable energy for the Apple-related proportion of their business.

More and more companies and people are also trying to put as much back into society as they take out, by creating “net positive” strategies. Dell is one such company embracing recycling by design, developing products with an eye to eventually recycling as many parts as efficiently possible. Richard Branson has created the Global Cooling Prize, a \$3 million competition to spur on new technology to create more sustainable air conditioners. And the Finnish government has set a strategic target to become a forerunner in the circular economy.

In one recent study, 71 percent of people said they care more about the impact a brand could have on them and on society than they do about the brand's products or services. This figure rises to nearly 80 percent for Millennials and post-Millennials.

Organizations that have put their green credentials front and center are already reaping the rewards. At Unilever, sustainable brands have seen on average 30 percent faster growth than Unilever brands that aren't. In fact, sustainable brands are now delivering 70 percent of Unilever's growth. ASOS has begun sustainable fashion training for its designers to encourage environmentally conscious business practices.

Many companies have already started to build ethics into their business mission statements and propositions. Now they must put their words into actions and prepare for a new wave of regulations regarding sustainability and climate change. Anyone who ignores this will be left behind – even those who are starting to address it now are already playing catch-up. Everyone should be building a circular economy strategy as part of their consumer-driven mapping.



Global garbage pollution is more serious and visible than ever.

“Everyone should be putting in place a circular economy strategy as part of their consumer-driven mapping.”





Climate change probably contributed to the California wildfires.

“Now that we have the ability to use materials and processes that were never previously considered to be resources for manufacturing, we have real alternatives to using virgin materials and traditional production methods.”

—— What's next?

Globally, the circular economy could unlock \$4.5 trillion of economic growth, according to a recent Accenture estimate. New business models will emerge with reuse and the circular economy in mind – realizing value where it was not seen before by rethinking the traditional linear model of “take, make waste.”

Businesses will move past the concepts of the sharing economy, to new models of ownership and value. They will be designing for a different set of considerations and a different set of associated costs. We'll see more emphasis on reverse logistics, repair, maintenance, disassembly, end of life, collection, hygiene and labelling.

We will shift the way we make goods, as a result of materials innovation and advanced manufacturing and production. Now that we have the ability to use materials and processes that were never previously considered to be resources

for manufacturing, we have real alternatives to using virgin materials and traditional production methods.

As governments start to put policies in place forcing wholesale industry change around waste, reuse and recycling targets, businesses must quickly make changes. This presents opportunities for new innovative players to collaborate with big business and support innovation at a large scale, while providing them with an opportunity to scale and share their message. These businesses are seeing the opportunity in CE (the certificate of health, safety and environment standards in Europe) and waste targets.

Power will shift to the grassroots and communities to drive change as individuals impatient for legislative change take action from the bottom up. There will also be more choice than ever for people to do things themselves through open-source innovation.

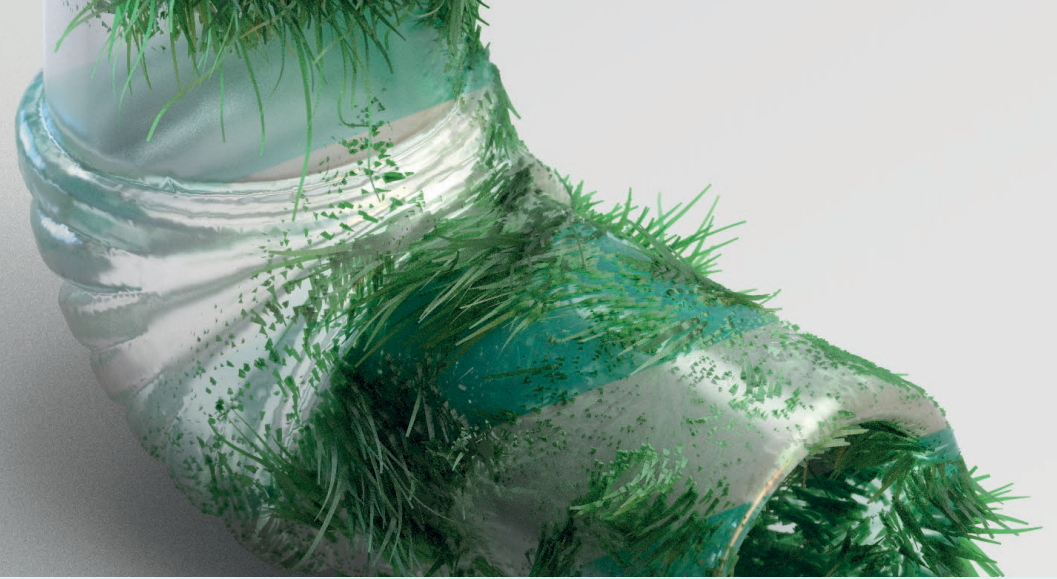
“Designing for ecosystems must be at the heart of rethinking how organizations approach the circular economy and supply chain.”

Designing for ecosystems must be at the heart of rethinking how organizations approach the circular economy and supply chain. This means putting the user in the middle, rather than considering them merely as the recipient at the end and making the user's journey more circular. It's about approaching sustainability not as an add-on or something to retrofit, but as a service integral to your product.

While it may be some time before consumers are prepared to shift personal habits to a more sustainable lifestyle – like strictly limiting their meat consumption – organizations must be ready for the tornado effect we have now seen around plastics. It could be repeated for other environmental issues with surprising speed.

Everlane's Reversible Hooded Puffer is made from recycled plastic bottles.





—— Fjord suggests

01

Redesign everything

Focus on the experience of making a difference. Make the experience of refilling, borrowing, returning or disposing as great as the experience of buying. To remove potential barriers to behavior change, make your sustainable products as desirable, affordable and convenient as non-sustainable alternatives.

02

Collaborate to get ahead

Think beyond your brand and business to industry opportunities, and shift together with your peers or even competitors. Join forces with others to solve problems collectively.

03

Tell your stories

Brands must tell stories around traceability, sourcing and impact to cut through and differentiate. Help consumers navigate the complexity of promises, certifications, and what's "real" versus what's "greenwashing."

04

Turn waste into wealth

Think about how to monetize and extract value from something that is no longer wanted, as well as how to create new value where it was previously nonexistent. View sustainability as a measure of impact and value alongside financial results.

Data minimalism⁰³



Data's headline appearances throughout 2018 distorted people's understanding of the value exchange between data owner (you) and data user (organizations). Expectations around how much people's personal data is worth became falsely inflated, and the mystery surrounding how it's used became a cause for concern. Moving forward, organizations must design for transparency, so that consumers can trust that they're pursuing only the data they need to build new products and services, and that they're using and storing that data responsibly.



— What's going on?

When the EU introduced the new General Data Protection Regulation (GDPR) last May, the flood of permission requests inundating people's inboxes revealed the extent to which they were generating and sharing data with organizations they engaged with. With the Cambridge Analytica scandal headlines fresh in their minds, people were suddenly worried about data misuse and therefore became more selective about sharing their data.

Customers' trust in organizations gathering and using their data was already dented. But last year's events left unprecedented numbers of people feeling exploited and vulnerable. In a survey for IBM, 75 percent of respondents said they will not buy a product from a company – no matter how great the product – if they don't

trust that company to protect their data, while 60 percent ranked a potential war less concerning than cybersecurity.

Organizations' struggle to implement new data regulations further stoked concern. Four months after the GDPR came into force, nearly 70 percent of companies around the world had failed to comply with addressing requests from individuals to obtain a copy of their personal data within the one-month time limit.

Cracks started to appear in the long-held assumption that customers happily share data with the organizations they deal with so long as they get better and more personalized products and services in return. Others suggested that people were tired of organizations promising (and failing to deliver) greater personalization in exchange for data.

Augmented Mundanity OS lets you interact with your computer as you would in the physical world.





“While many people assume their individual data set is desirable in its own right, organizations actually want it most when it’s part of aggregated data.”

Yet, while organizations’ appetite for data gathering, warehousing, analytics and related services continued unabated, a host of new entrants saw an opportunity to get involved in the fast-growing data-trading marketplace by meeting people’s growing demand for ways to better control and monetize their data.

CyberVein, for example, has developed a blockchain-based system enabling people to sell their own data, joining the growing number of other companies already doing the same, including Wibson and Ocean Protocol. BehaviourExchange is running a mutual back-scratching digital platform where people can turn their data into money

and B2C businesses can reach target customers. Health Wizz, meanwhile, enables patients to securely aggregate, organize and share their medical records and is one of a new generation of new niche data marketplace platform players.

By the close of 2018, such developments had overinflated people’s understanding of their personal data’s value, meaning that their understanding of the data value exchange was out of sync with organizations’. While many people assume their individual data set is desirable in its own right, organizations actually want it most when it’s part of aggregated data.

What's next?

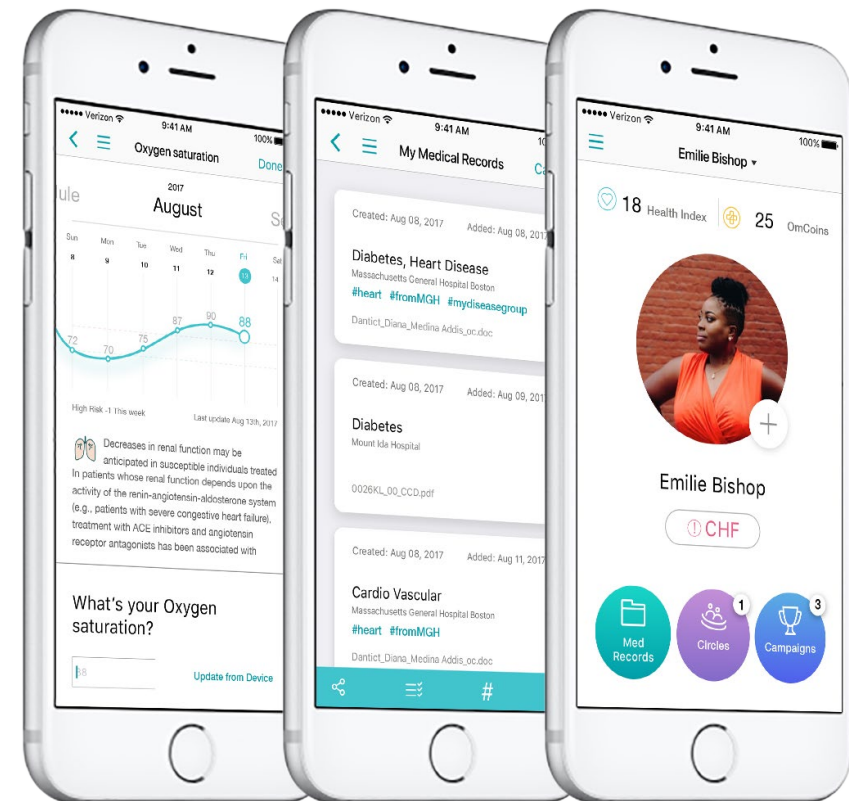
In 2019, organizations must clearly show the payback for users sharing their data, drawing a straight line from the act of sharing to receiving relevant products and services in return. They'll need to demonstrate what's in it for the customer, ensuring that the data value exchange is fair to them.

Trust and transparency will offer a competitive advantage to those who maintain it, opening up new opportunities to attach "trustability" scores to all sources of data and information. Trustworthy brands are inherently more meaningful and outperform the stock market by an estimated 206 percent.

The objective must be for both parties – individual and organization – to get maximum value over the long term. If organizations design for transparency, they will be able to rebuild trust, allowing individuals to have faith that their relationships with those organizations are mutually beneficial.

Transparent design means clearly demonstrating the value both data owner and data user can gain and designing products and services to give the individual greater control. Some are already doing it well, like Augmented Mundanity OS, a project that envisions a new kind of operating system that makes it simpler to understand and use privacy tools. New York City's Open Data for All initiative is another great example. Its aim is to improve the accessibility, transparency and accountability of NYC government. By publishing all of the data sets produced by the city's agencies and organizations, it helps New Yorkers use, learn about and ultimately benefit from the city data.

Expect a shift from "data maximalism" to "data minimalism," as organizations strive toward gathering only the data they need for their products and services. Minimal viable data will be the new trend in product design.





Wibson lets you use blockchain to sell your own data.

“Consumers increasingly regard their personal data as an asset that they can use to their advantage in data exchanges with organizations.”

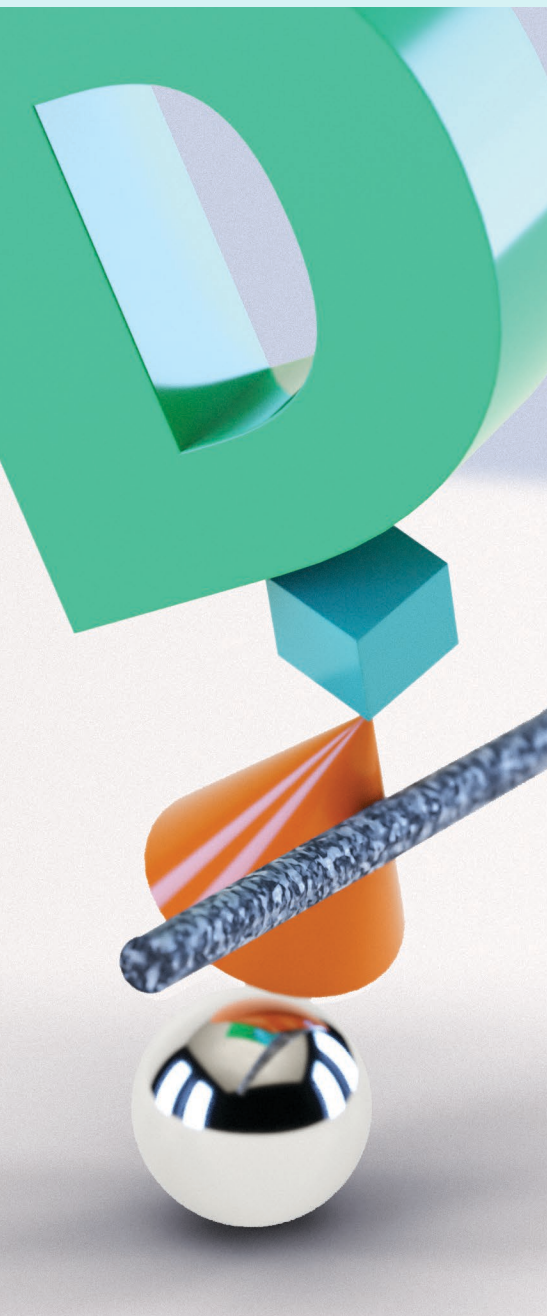
People will no longer accept mediocre rewards in exchange for their data; they will expect more from services, so organizations will be forced to do more to ensure customers can clearly see what's in it for them and fully understand what consent really means. They can build trust by giving customers the tools to not only make informed choices about what they share and with whom but also the chance to correct inaccurate data. This will also improve the quality of the data shared, which, in turn, can be used to improve algorithms and design out biases.

Algorithmic fairness will continue to be an issue of utmost importance. As virtually all organizations will continue to rely on algorithms for key business decisions, they must work even harder to guard against algorithmic bias. Public transparency won't be enough – they'll also need to develop tools that open up the artificial intelligence “black box” to investigate potential bias in data sources.

Accenture is already taking the first steps in this direction, having developed an algorithmic fairness tool that quickly evaluates whether your data creates fair outcomes. It uses statistical methods to identify when groups of people are treated unfairly by an algorithm –defining unfairness as predictive parity, meaning that the algorithm is equally likely to be correct or incorrect for each group.

Organizations will need to continue to address data leaks with much more rigor, treating them as the oil leaks of our time. Clean-up teams will be essential to help companies understand what's been lost and how it affects users.

It won't be long before companies start habitually sharing data, and there will be a move to create data exchanges, or open data APIs, as has happened in open banking. Once accustomed to sharing data, businesses will then form around these larger data sets.



— Fjord suggests

01

Set expectations and live up to them

Empower people to know how, where and why their data was used in your personalization framework, and make clear what they will get in return. Gone are the days when consumers would willingly hand over all their information without clear reason or payback.

02

Embrace “data minimalism”

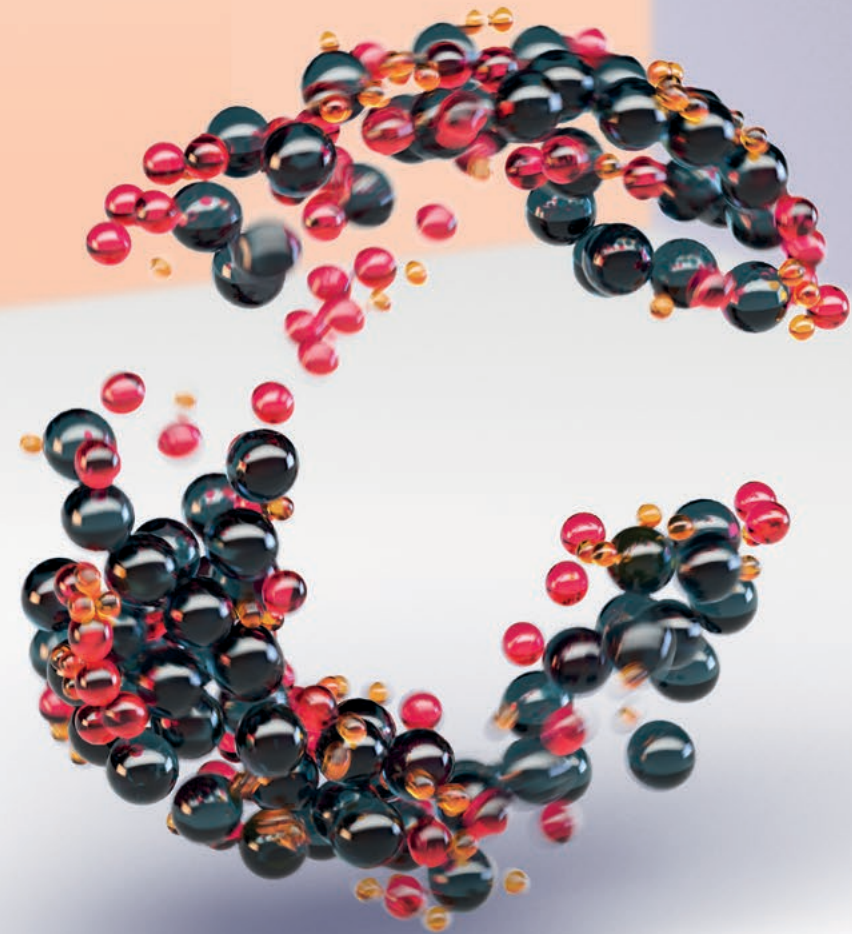
Ensure your data strategy follows the minimal viable data pattern and collects only what’s needed to drive the service. Closely align your data collection strategy to your business objectives. Collection, measurement and tailoring of services are intrinsically linked.

03

Champion trust

Allow people to act when data about them is wrong by designing transparency and enabling people to recalibrate algorithms. Prove that what you get out of using their data doesn’t outweigh the value they get from sharing it.

Ahead of⁰⁴ the curb



Our cities are changing. Around the globe, lines are blurring between public and private transport, passenger transit and item delivery. The problem is that cities aren't keeping up, so insufficient regulation and lack of central planning has resulted in a free-for-all that's leading to urban mobile service clutter and a fragmented user experience. In 2019, organizations must start to consolidate mobility services within a single, coherent ecosystem built on real-time needs.

— What's going on?

Transport in cities used to be simple. Everyone knew their place: There was delivery, private transport for individuals and public transport to move the masses. Now, a rapidly expanding and diverse array of mobility players are moving in lots of directions, fast.

It's all driven (pardon the pun) by a shift in population from rural to urban areas. According to the United Nations, the number of people living in cities could double to 6.5 billion by 2050. By 2030, we're expecting over 9 percent of the world's population will live in just 41 megacities (those with more than 10 million inhabitants), but city infrastructures are struggling to keep up.

Different transport modes were starting to overlap or become cross-purpose when cities began publishing their APIs, creating a playground for anyone interested in meeting growing demand for

new models and services. But the sheer volume of interest and the lack of any centralized mobility systems resulted in mobility providers hacking old models. In stepped new, private players to grasp the resulting opportunities, and suddenly our cities were overwhelmed.

The streets of Paris have become cluttered with hundreds of electric scooters from Californian operators Lime and Bird, competing with Chinese-run dockless bicycle-sharing schemes and city-operated bike scheme Vélib'. Sidewalks have become so crowded and dangerous as a result, the French government banned scooters in October.

In the US, a recent study suggests that new, on-demand car services aren't just compounding congestion – they're stepping up driving, cannibalizing transit trips and critically increasing traffic deaths by 2 to 3 percent nationally.



Dockless scooter operator Bird help us get around, but can clutter sidewalks and become obstacles for pedestrians.

Bike-sharing service Mobike is now in 200 cities worldwide.





"Vahana" is a self-flying taxi pioneered by Airbus.

UPS is building a fleet of electric vehicles with zero tailpipe emissions.



We're also seeing many companies branch out from operating in just one transport mode. Delivery companies UPS, DHL and FedEx, for example, are building up fleets of electric cars on the ground, and transportation firms like Rolls-Royce, Uber and Airbus are racing to pioneer flying cars. Automotive manufacturers like Daimler, which is already offering car-sharing, are starting to explore integrated transport ticketing, while transit app Citymapper is running a hybrid taxi-bus fleet in London.

The expansion doesn't stop there. Organizations that started out in one region or country are extending their reach nationally or internationally. Take Chinese-owned bike-sharing company Hellobike, for instance, which rebranded as Hello TransTech and then started a taxi-hailing service with partners in Chengdu, Nanjing

and Shanghai; in Shanghai, the company is also developing an intelligent transfer system that integrates stations with popular bike-parking spots. One of their rivals, Chinese-owned bike-sharing service Mobike, has branched out to 200 cities in 15 countries worldwide.

Those who've historically worked outside the mobility market are starting to muscle in, too. Nike, for example, has introduced a curb-side pick-up service as part of its new Nike by Melrose concept store in LA.

A flood of next-generation products, services and business models are coming to market around the world. In Singapore, Finnish startup MaaS Global has teamed up with local transport giant ComfortDelGro to launch an app for commuters to use across taxis, buses, trains, rental

cars and bicycles. In Germany, Siemens has launched the world's first autonomous tram. And in the UK, Bristol-based Vertical Aerospace recently unveiled details of its own solution: the eVTOL flying taxi.

As online retail continues to flourish, so does opportunity for "last mile" solutions, bridging the gap between delivery depot and a customer's front door. In the US, Amazon's Flex program pays ordinary people to deliver packages in their own vehicles in specific markets. Amazon is also developing its own shipping service. In China, tech company JD.com is testing delivery drones and recruiting locals to deliver packages to their neighbors.

In an attempt to address the clutter and confusion, a group of diverse and influential transport stakeholders launched the Sustainable Mobility for All initiative after the Climate Action Summit of 2016. They're now working to develop a strategic initiative to transform the transport sector globally. With a vision for access to free mobility, they're looking to set the rules of engagement for the imminent battle for mobility dominance.

Despite such efforts, mobility in cities is still a fragmented ecosystem of private companies, individuals and government – often unregulated and universally unorganized.

The "Nike by Melrose" store in LA has a curbside pickup service.



— What's next?

Over the next year, we'll see a race for clarity and dominance in the fragmented city mobility ecosystem.

By 2021, we can expect public and individual transport to fully merge, and we'll likely sense an attitude shift as travelers come to think simply of getting from A to B, rather than ruminating over their mode of transport. Multimodal and intermodal services and platforms will grow commonplace, as will mobility planning tools. Services will integrate across multiple modes of transportation and offer subscription-based payment models, including a flat fee across all options. Future payment systems will be integrated, spanning multiple operators and providers.

Companies should be looking for ways to design for changing mindsets in changing contexts – and the stakes are high. Customer experience will be more than just a differentiator. It'll be a prerequisite to compete.

People will want unified, seamless transit experiences, and the big winners will be those who provide them by consolidating and commodifying mobility services.

In March 2019, a driverless shuttle bus designed by minimalist Japanese retailer Muji, in collaboration with Sensible 4, will appear on the streets of Helsinki. This is an early example of something we can expect to see a lot more: brands with no history in mobility integrating it into their primary service layer. Eventually, we could even see private players offering free alternatives to challenge the traditional public and private paid-for models.

New city data and new partnerships will shape the future of mobility, which will be a balance of existing systems and new initiatives. Services will be integrated, and infrastructures for different transport modes, payment and ticketing systems will become shared.

The world's first driverless tram by Siemens.





Muji and Sensible 4 designed this driverless shuttlebus.

“Digital offers the most immediate possibilities for improving legacy transport systems. Compared with the slow creep of public infrastructure projects, it’s fast and relatively cheap, and it offers countless ways to improve existing transport systems and enhance future projects.”

Digital offers the most immediate possibilities for improving legacy transport systems. Compared with the slow creep of public infrastructure projects, it’s fast and relatively cheap, and it offers countless ways to improve existing transport systems and enhance future projects. It also offers a way to connect and unite incoherent parts to create an integrated transport ecosystem.

We can start to get excited when city planning and design takes a more agile approach, resulting in systems that respond to real-time data and citizens’ changing needs. Already, we’ve seen some parties actively starting to source and share data to improve urban planning. For instance, through the Uber Movement website, Uber freely shares data around traffic flow in cities where it operates with city planners and researchers looking for ways to improve. As others follow suit, we’ll start to build the data required to create a single, accountable mobility ecosystem.

In the US alone, the number of packages delivered annually is expected to rise to 16 billion by 2020 from 11 billion in 2018. As we all use online shopping options more and more, “last mile” delivery services will need to innovate to tackle the challenges of traffic congestion and failed deliveries when recipients aren’t home. Deliveries will become branded experiences.

There will be many contenders trying to dominate the mobility market. For now, it’s unclear who will be in the best position: those providing seamless experiences or those providing the most integrated end-to-end experiences. We’ll need single access points, which will come through consolidation and acquisition – and whoever wins here will be in pole position to win the future of mobility.



— Fjord suggests

01

Design for moving from A to B

People will soon stop thinking about transport mode and instead start thinking about simply getting from point A to B. Allow for customers' needs that ebb and flow depending on context and over time. Provide hassle-free pick-and-choose services. Think beyond classic market segmentation, and address regional archetypes and places sharing the same mobility characteristics – beyond borders.

02

Go for gains, not pains

You don't have to be a transport provider today to embed mobility in your service. Consider new business models that capitalize on the benefits of adding mobility into your service layer.

03

Remember the last mile

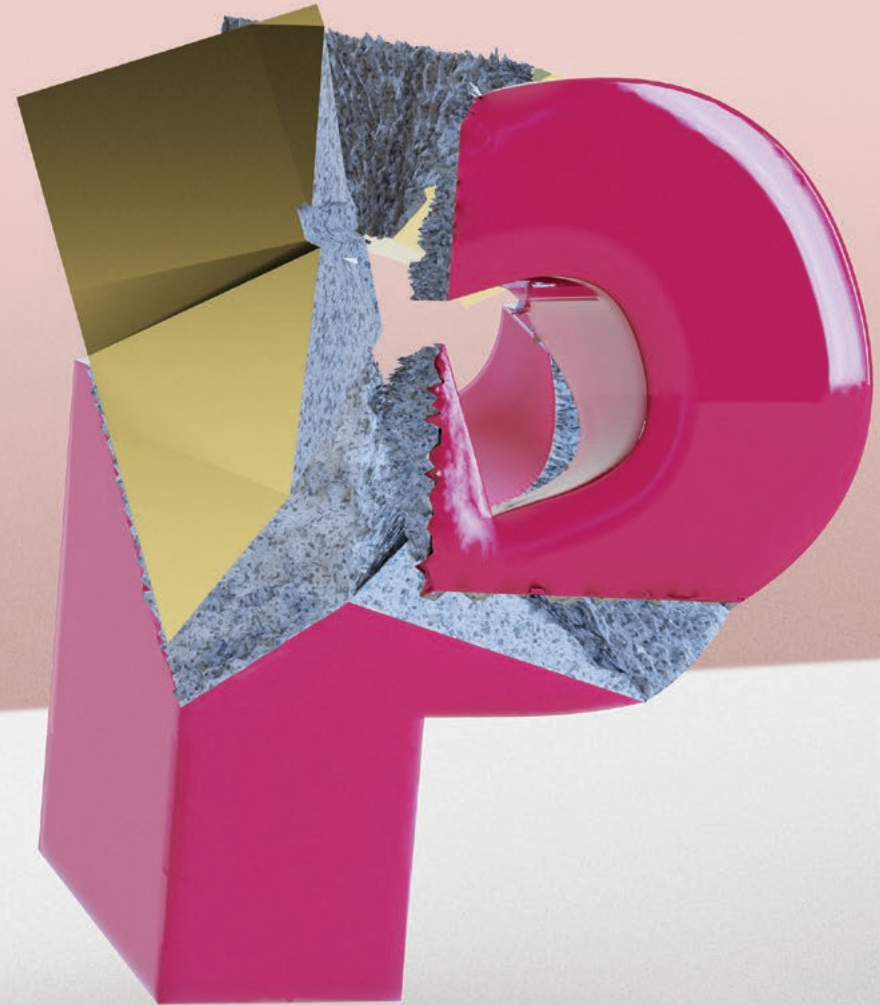
As mobility becomes an ecosystem, many aspects will connect or merge. At this point, the main economic and social value lies in smart system management. It'll be critical to link this mobility system to existing infrastructures, manage access to it and allow seamless connections to other adjacent service areas.

04

Partners trump platforms

Many mobility needs are currently unmet, but anyone can remedy this with the right partner. The critical mass required to deliver a working ecosystem will require collaboration and white-label platforms, API consolidations and partnerships, both public and private.

The inclusivity⁰⁵ paradox



People expect organizations to see and engage with them as individuals. But there is a risk that by trying to be more inclusive, organizations inadvertently exclude others. And by trying to speak to the individual, organizations risk saying something not quite right. Eventually, artificial intelligence will help overcome this paradox of inclusivity. Until then, organizations must evolve their approach beyond stale segmentation to meaningful mindsets if they're to meet developing expectations.

— What's going on?

2018 has been a big year to hear – and include – more voices. Underrepresented voices that have previously been ignored by mainstream media now use digital technologies to unite and be heard through grassroots activity, opening the door for organizations wanting to connect with them. But while we can now quantify the voices of those who have chosen to rally on city streets, red carpets and around hashtags, how do we quantify those still hiding in the shadows of uncollected data?

At the same time, too many organizations still shape the design and development of mass-scale products and services based on quantitative insights and demographic sameness (and the assumptions they produce). While numbers may not lie, they don't always tell the full story because they're blind to human behaviors in context. As Nassim Nicholas Taleb points out in his book "Fooled by Randomness: The Hidden Role of Chance in Life and in the Markets," few people understand the limits of the statistical models they create, and

when people have unwarranted faith in those models, they can end up making worse decisions than if they'd used no model at all.

The UK's House of Lords recently asked the polling industry to "get its act together" after it failed to predict the outcomes of the 2015 and 2017 general elections and the 2016 EU referendum vote. When pollsters miss the mark, it's not because they don't have enough voter data; it's because filter bubbles blind them to voters' real-world context.

We're also becoming increasingly aware of the potential for algorithmic bias to lead to people being treated unfairly, or worse, excluded altogether. New York City Council passed a bill in December 2017 to set up a task force to come up with recommendations on how to publicly share information about algorithms and investigate them for bias. French President Emmanuel Macron recently insisted all algorithms the French government uses will be open, while the British government has called for those working with data in the public sector to be transparent and accountable.



The House of Lords has asked the polling industry to "get its act together."

"Inclusivity is both an opportunity and challenge for a diverse range of organizations from national governments to start-ups."



Some fashion companies need to better understand that Muslim women are not one homogeneous group.

“Organizations will demand a more qualitative understanding of what people’s data really tells us within the context of their lives. We’ll move on from using traditional market segmentation to defining mindsets that indicate individuals’ behaviors and attitudes to design personalized products and services.”

We no longer define consumption patterns by traditional demographic segments like age, gender, location, income or family status. Now, we’re in a world of “post-demographic consumerism,” where we place more importance on lifestyles and mindsets, and brands are under pressure to reinvent themselves to maintain their appeal.

According to one recent study, the hottest consumers that brands should now be targeting are “transformists.” This new group cuts across age groups and backgrounds and is populated by driven, curious and connected people who make a habit of engaging with brands. They don’t just use tech for fun but to better their lives and support their values and causes – from social issues to professional goals.

One relatable example of unintended exclusivity is how major fashion brands have struggled to crack the \$254 billion Muslim fashion market. While major players have created lines to appeal to Muslim women, their efforts have attracted criticism for working on the assumption that Muslim women are a single, homogenous group.

Inclusivity is both an opportunity and challenge for a diverse range of organizations, from national governments to startups. Hotels.com is among brand owners using tech firm Persado’s artificial intelligence platform to fine-tune the emotional components of the marketing language it uses to tailor what it says and how it says it to different customers.

The first thing any organization does with customer data is use it to validate a hypothesis. Next, they identify patterns of customer behavior to hone products, services or strategy – and this is the stage many are at today. The third step is the most advanced: using data to create individually personalized interactions between organization and customer.

Many organizations feel overwhelmed by the task of mounting a response that will have a strong enough impact in the face of growing calls for inclusivity. Until AI can solve the inclusivity paradox, tomorrow’s winners will be those who don’t settle for traditional demographics but take the time to understand individual mindsets, their value in the present, and how – over time and in different contexts – they can shift and grow.

— What's next?

A major challenge in the year ahead will be working out how best to design to be inclusive at a mass scale – not just for the underrepresented groups speaking out, but for others who haven't yet raised their voices. It's one thing to hear diverse voices and another to design products and services that include them.

As consumers increasingly crave products and services that feel tailored to their wants and needs, people will become less tolerant of those that only partly fulfill their needs and don't solve an issue. That means organizations will have to reevaluate their brand heritage within a context in which new racial, social, cultural and sexual norms have become established.

More organizations will realize that statistical modelling has limitations and will switch to models that actively help

them to achieve inclusivity. For example, Hewlett-Packard has been working on and rolling out a "Reinvent Mindsets" campaign that celebrates inclusion and highlights unconscious bias that affects both the corporate world and society at large. The wisest among them will interrogate the "why?" behind data and work to achieve a true, 360-degree customer view, resulting in the data landscape becoming richer as it evolves. We'll see new frameworks emerging, blending big data (quantitative), thick data (qualitative) and wide data (liquid expectations, trends, contextual insights and industry insights).

Organizations will demand a more qualitative understanding of what people's data really tells us within the context of their lives. To design personalized products and services, we'll move on from using traditional market segmentation to defining



Those who speak out can be quantified, but what about the silent among uncollected data?

"Too many organizations still shape the design and development of mass-scale products and services based on quantitative insights and demographic sameness (and the assumptions they produce)."



mindsets that indicate individuals' behaviors and attitudes, with design research playing an increasingly powerful role. This is true of what Fjord and Volkswagen found in "The Future of Mobility" study, which revealed the complexities behind what people want, expect and need when they're commuting and traveling. The study merged both market and economic factors as well as people's personal preferences to define six overarching mindsets, which could be broken down into 21 human themes.

We'll come to expect the psychology of behavioral science to become part of the design skillset. Organizations must also draw inspiration from foreign or disparate demographics, and mine smaller niches of interest rather than circumstance. We'll start to look for new ways to measure how successful products and services are in terms of inclusion and impact.

It'll no longer be a question of choosing between qualitative or quantitative research, but how best to achieve a scalable balance of the two. The organizations that can integrate qualitative and quantitative data well will have a clear competitive edge.

Large tech companies will start to produce tools to simplify hyper-personalization. Organizations will also evolve simpler, more effective targeting for communications until such time as technologies' editorial powers become so sophisticated that they can generate fully personalized content.

Companies will need to take greater care when it comes to personalization and microtargeting to avoid "uncanny valley" unease. The uncanny valley is the paradox in robotics, in which the more human-like robots become, the more our empathy increases, but once they're too realistic, our positive feelings quickly turn to revulsion. Personalization and microtargeting pose a similar risk, as the more an organization gets personal, the more impersonal it'll seem when it misses the mark.

Organizations must aim to design meaningful interactions for all customers that bring tangible long-term value, both to users and to the organization's bottom line. Inclusive design is a powerful tool for achieving this, but its effective deployment depends on capturing the realities – and complexities – of modern life.



— Fjord suggests

01

Marry quant and qual

When designing services, carefully mix human insights with data to breathe more color into facts that are often black and white. Learn the differences between qualitative insights and quantitative statistics at scale and how each can make the other more powerful.

02

Focus on mindsets over segmentation

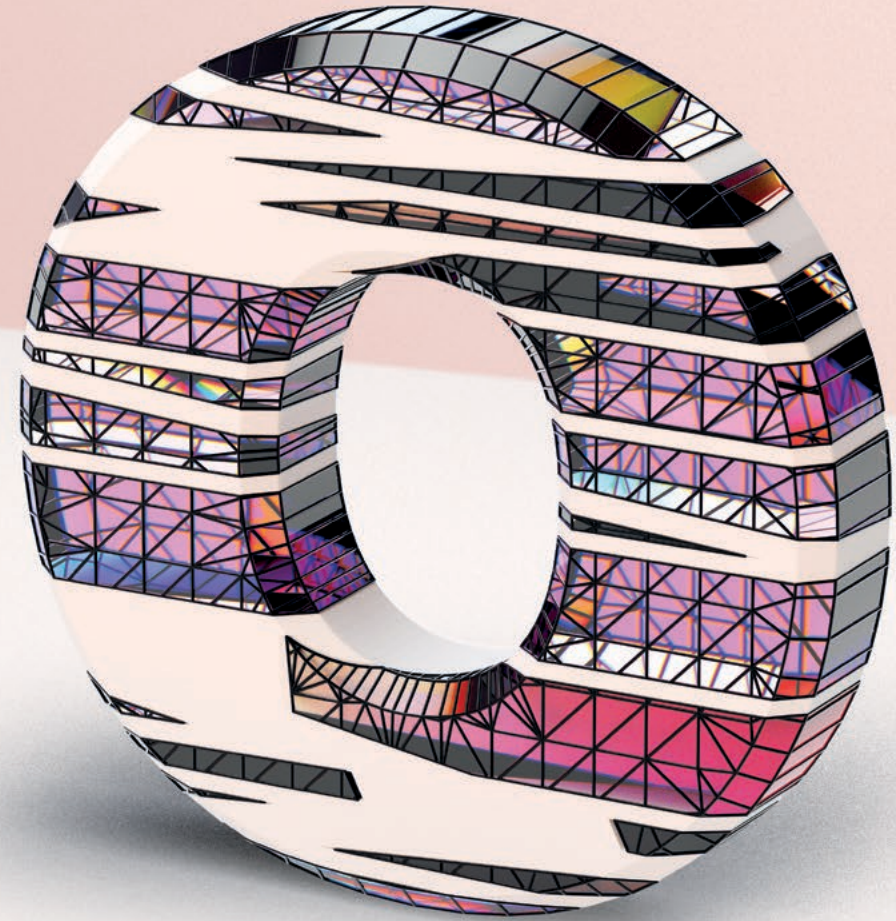
Move away from traditional marketing approaches that treat people as a homogenized group according to their demographics. Instead, focus on the mindsets that group people together based on their motivations, attitudes and behaviors.

03

Become a Living Business

Living Services are personalized services that adapt to user needs in real-time context. To be able to deliver them, you need to rewire your business by putting humans at the center and strive for ultimate customer relevance – you need to become a Living Business.

Space odyssey⁰⁶



First, digital drove us to our screens. Then, physical fought back. Both dramatically changed our expectations of the physical world – first in retail, then in the workplace and soon in public spaces. Now, as digital and physical intertwine, organizations must find ways to seamlessly interconnect digital and physical experiences. This will require a fundamental rethink of the approaches and tools for designing spaces in order to meet users' expectations of greater flexibility and personalization.

— What's going on?

In our 2018 Trends, we predicted Physical Fights Back against digital with a shift in emphasis away from screens to physical spaces. For years it had been assumed that digital would lead to more of us working and shopping remotely from home. Then, physical space was acknowledged as a powerful way to engage audiences, talent and communities. Our point was that physical was becoming frontstage in the experiences we design.

Next, a further shift occurred. People became more global, on-demand, social and holistic, blurring the boundaries between work and play. The resulting digital data powered a race to better quantify human experiences in physical spaces and meet their increasingly personalized demands by creating new ones. Across retail and work, there was a switch from focusing on designing space for technologies to designing space for humans in order to elevate the minds and experiences of its users.

Now, however, the emergence of an increasingly integrated approach to digital and physical space is becoming evident, led by the retail environment and followed by work.

Convenience powered by seamless connectivity depends on data, and there has been a further shift among retailers to gather, use and act on customer data both more effectively and creatively.

China's Hema supermarket chain is a fusion between supermarket and fulfillment center, where everything happens via an app, powered by data and payments facilitated with facial recognition. Its owner, Chinese retail giant Alibaba, calls this "New Retail."

In November 2018, Nike's new flagship store opened in New York City. The design makes shopping in a physical store as convenient as shopping online, wooing people who hate shopping in real life. The space contains two customization studios, one-on-one shoe consultation and a sneaker center, which has displays showing how shoes are designed, prototyped, and built. But the store was also designed for people who prize convenience above all else with a special "Speed Shop" embedded inside.

Kohl's, also in the US, is deploying learnings from its digital business to meet customers' demands for localization. To reduce shipping time, Kohl's is using its



Your face is your bank card at Hema supermarket.



Herman Miller's research-based "living office discovery process" for client





Amazon 4-star is a new physical store where only products with 4-star reviews or above are stocked.



Nike's new flagship NYC store replicates the online experience.



stores as part of its fulfilment of online orders, partitioning its online orders geographically to inform in-store product choice. Just over 95 percent of the company's store assortment is now localized by store.

As evidenced by these examples, the future of retail is positive and diverse. Imaginative, experience-led retailers are recognizing this and adopting a variety of different ways to disrupt and differentiate in a rapidly changing industry. At Fjord, we've identified these ways as the new "seven shapes" of retail.

In the workplace, WeWork focused, until recently, on offering individuals and small businesses physical coworking spaces. Now, it's augmenting its physical space offer with digital information gathered from its 268,000 members in 287 locations across 23 countries. WeWork uses this data to give real-time recommendations to big corporations on how to get more out of their spaces and reduce employee churn.

US-based office furniture-maker Herman Miller is using a proprietary, research-based "living office discovery process" to help clients better envision the office

they want and ensure it's more tailored, responsive and flexible to their needs. This reflects a shift to catering for today's needs rather than processes and technologies from a previous era, as many legacy workspaces do today.

Meanwhile, CapitaLand, one of Asia's largest retail estate companies, recently acquired Singapore-based coworking company Collective Works to create and implement a new generation of hybrid work space models. Its aim is to develop community-driven, tech-enabled workspaces for tenants by integrating conventional office space with flexible space to create an innovation workplace ecosystem.

At Fjord, we've started receiving briefs to redesign workspaces as a buildout of changing employee experience.

Workspace is also being rethought at a district and city level. World-renowned architects such as Tatiana Bilbao, Alejandro Aravena and Balkrishna Doshi envision humane cities and evoke local culture in their affordable housing schemes. Urban planners are seeking new ways to reinvigorate dying business districts and local communities.

— What's next?

The intertwining of digital and physical will continue to deepen in 2019. A wave of change, driven by retail and office environments, will hit all our spaces, from the most industrial to the least fixed.

Growing competition to build customer and employee loyalty and retention will make space an increasingly powerful way to make an impact. Physical experience with meaning and value will also be used to meet individuals' growing desire for mindful design – in line with another of our trends this year: Silence is Gold.

But the cost of space is rising, and there's a race to differentiate through physical experience. There's also the great potential of new technologies to create more sustainable spaces.

Organizations will use their understanding of customers' online behaviors to reshape offline experiences and vice versa, following the lead set by companies such as Mastercard and Google. They are working

together to develop two-way tracking conversion that transcends the digital world to finally connect offline behavior and digital marketing. Many will emulate Alibaba and others like it, building on a seamless connection between the digital and physical experience.

Just as the business purpose, format and expectations of spaces will continue to evolve, so too will the way designers create them. Going forward, organizations must tackle these design challenges with a different, more fluid mindset and approach. Design of spaces will become more holistic. Across both work and retail spaces, digital and physical will become fully entwined and influence each other more closely. It will become harder to distinguish between permanent and moveable space, business- or art-focused space, and publicly- or privately-owned space.

WeWork uses insights from its 287 coworking spaces to advise corporations.





“Software will not replace all offline retail, but will be used instead to transform certain offline retail experiences.”

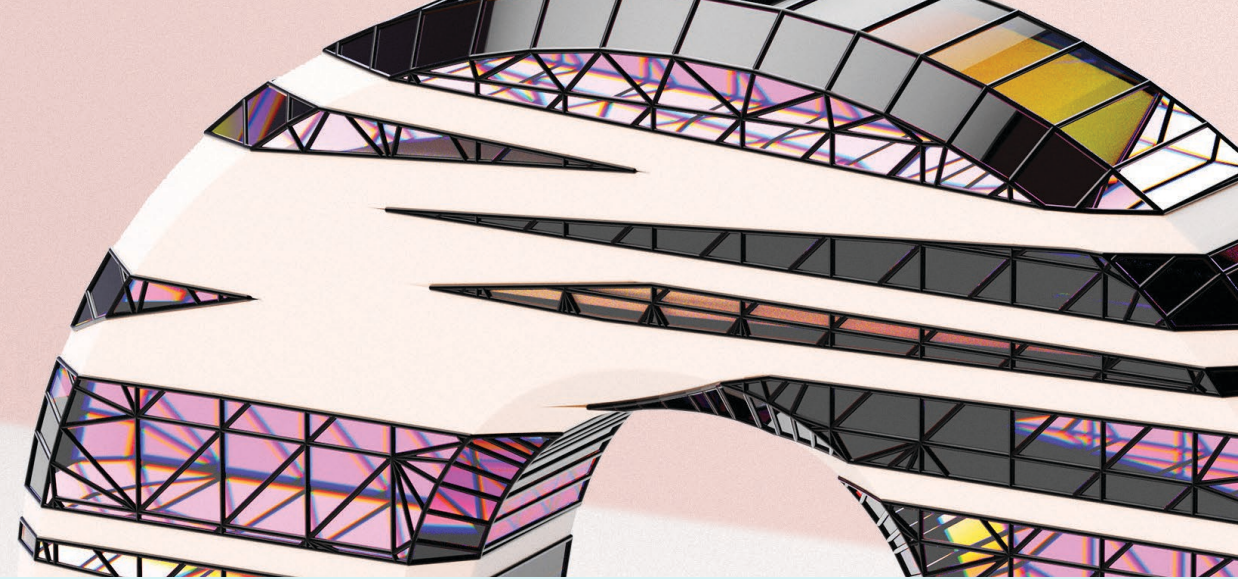
Increasingly, the physical and digital journey will be created as a single design informed by and focused on meeting the holistic needs of the users that an organization most wants to attract and engage with. Organizations will open up to ecosystems, designing digital channels, stores, supply chain or communities as part of an integrated whole. Towns and cities will become more entrepreneurial. Autonomous vehicles will allow spaces to move around. No space will be left unutilized.

In retail, the line between the digital and physical store will fade, and the experiences of each will become one. Data collection from e-commerce journeys will merge into store movement, interactions

and transactions to create a richer understanding of how the design of the digital experience can lead to greater in-store spend.

Online activity will also more closely shape store format design. Increasingly, physical retail space will be tailored, honed and enhanced by data gathered to pre-empt the needs of those using them. Greater focus will be needed to align retailers’ in-store employees with customers. “Being Instagrammable” will become an aspect of architecture briefs.

Organizations that can’t afford to either invest in work or retail space or drive differentiation in the physical environment will give up market share to those that can.



— Fjord suggests

01

Let online behaviours inform offline

People's digital behavior can give powerful insights to what people want and value. Use those insights where appropriate in a physical environment, just like Amazon did with their four-star physical store that only stocks products that have been given four stars or more in their online reviews.

02

Mind the gaps

The experience of seamlessly moving between digital and physical channels is evolving. Explore the potential of new tech partnerships, such as the one between Google and Mastercard, to make it happen.

03

Link space and business strategy

Define the productivity you want from your space, and design around it. The business purpose of space is changing, and that needs to be reflected in your business strategy.

04

Create a connected ecosystem

Look at the ecosystem of services and experiences offered in your space, and link those to your customers' mindsets. This is what should drive your design decisions.

Synthetic⁰⁷ realities



There's a new kind of reality on the block. Generated and mixed realities are blurring the boundaries of "truth" and challenging how we value it. As synthetic realities become more normalized in 2019, organizations should look past the drama and fear associated with them. Instead, they should hone new strategies to capitalize on their creative potential and manage the risk of unwittingly being featured in a synthetic reality created by someone else.

What's going on?

We live in an age of mixed reality. Not so long ago, this meant virtual reality or augmented reality – versions of reality we accessed via a headset or screen. But last year, synthetic reality, most often generated by artificial intelligence, reached new heights of sophistication. This sparked controversy and also fascination about its creative possibilities.

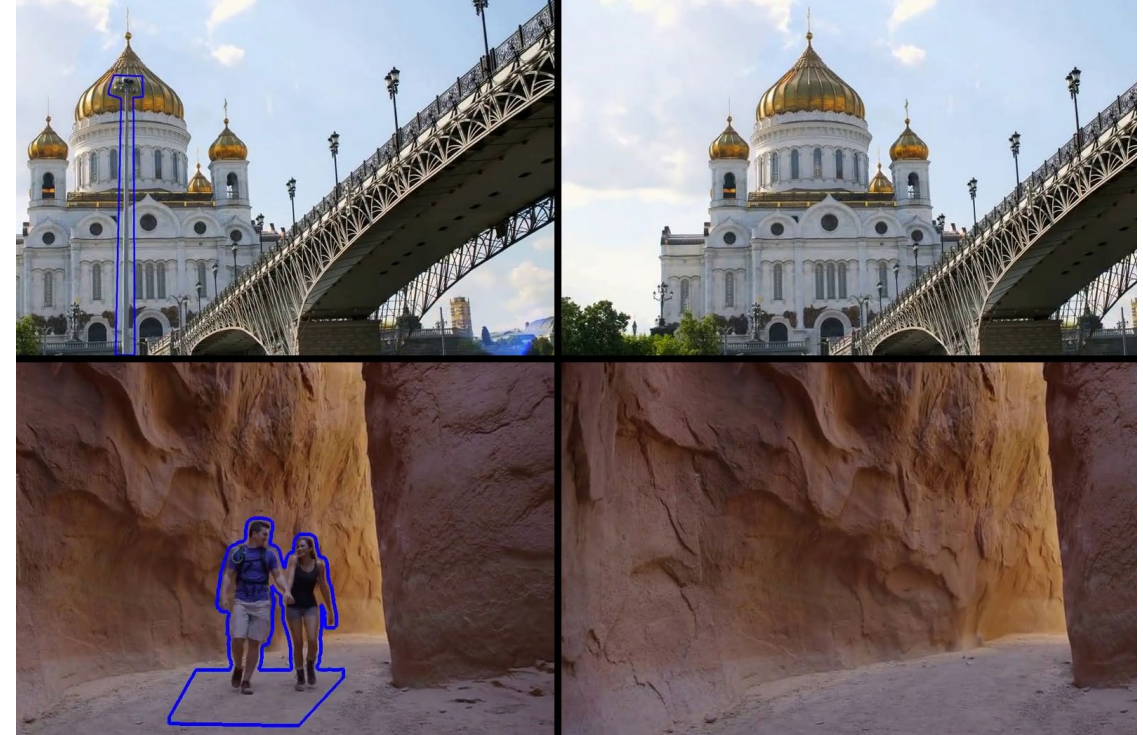
In April 2018, a video apparently showing former President Obama calling President Trump names went viral. It was part of an explosion of scandalous photo manipulations created for hoaxes and propaganda using “deepfake,” an AI-powered, face-swapping technique.

A month later, Google showed off its Google Duplex technology. Google Assistant made a synthetic voice phone call, which generated extra interest because of how naturally the AI interacted with a human, even dropping a casual “mmm hmm” into the conversation.

When photography evolved and Photoshop was invented, photographic images could no longer be assumed to be a reliable source of evidence. The same is now happening with audio and video, thanks to deep learning technologies.

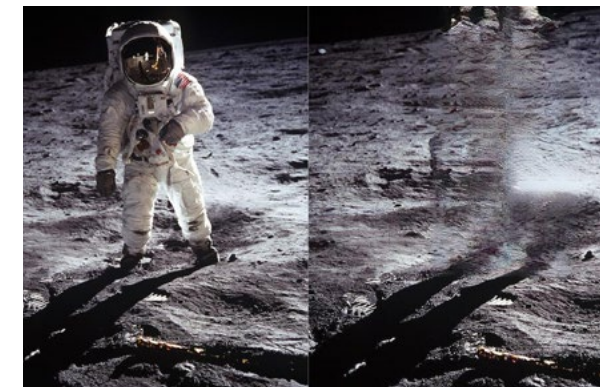
The technology behind face-swapping can now map any image style to another. It is already able to generate moving faces, bodies and objects from simple outline drawings. And it can swap the characteristics of fruit or animals, such as turning a video of a horse into one of a zebra.

A new tool from MIT can erase anything – or anyone – from old photos. Meanwhile, Adobe Research has developed a tool called Project Cloak, which can remove unwanted objects from videos, powered by deep learning algorithms. In November 2018, China's state-run press agency Xinhua News Agency launched its first AI anchors – digital composites created from footage of human hosts that read news using synthesized voices.



The Adobe Project Cloak tool can remove people or objects from videos.

MIT's Deep Angel software tool erased the astronaut from this image.





The CGI-generated character “Lil Miquela” has 1.5M followers on Instagram.

Synthetically-generated brain scans are being used to help analyse real ones much more accurately.



Unsurprisingly, a common response to the rise of synthetic realities has been one of serious concern. In September 2018, three US lawmakers sent a letter to the director of national intelligence asking him to assess the threat posed to national security by this new form of fakery. The same month, California governor Jerry Brown signed regulations into law to make it easier for Californians to know whether they are speaking to the synthesized voice of a bot.

While we must be vigilant about potential pitfalls, we’re also seeing a wide range of positive applications of synthetic realities across entertainment, health care, mobility, security, automation, art and design.

In medicine, researchers in the US have trained an AI generative adversarial network (GAN) to generate synthetic abnormal magnetic resonance images of the brain. These can be used to augment a small data set or to train a deep learning algorithm. Synthetically generated brain

scans have already been successfully used to train other machine learning models, with 14 percent better accuracy than ones trained on actual data. And it doesn’t come with any privacy issues because the data isn’t real.

In entertainment, a small but growing number of actors are digitally preserving themselves to continue their careers beyond the grave – inspired, perhaps, by a de-aged Carrie Fisher and the on-screen resurrection of Peter Cushing in “Rogue One: A Star Wars Story.”

Art project come Instagram influencer, CGI-generated robot Miquela has risen to fame on social media through her unique style and activism. Miquela has made her way into fashion magazines and is a musician/ songwriter whose first single was released in 2018. She is following in the footsteps of Hatsune Miku, a patented “singing voice synthesizer” created by Japanese music technology company Crypton Future Media Inc. Powered by Vocaloid,



the underlying technology, Miku is a virtual pop idol that performs as a 3D animation in front of huge crowds.

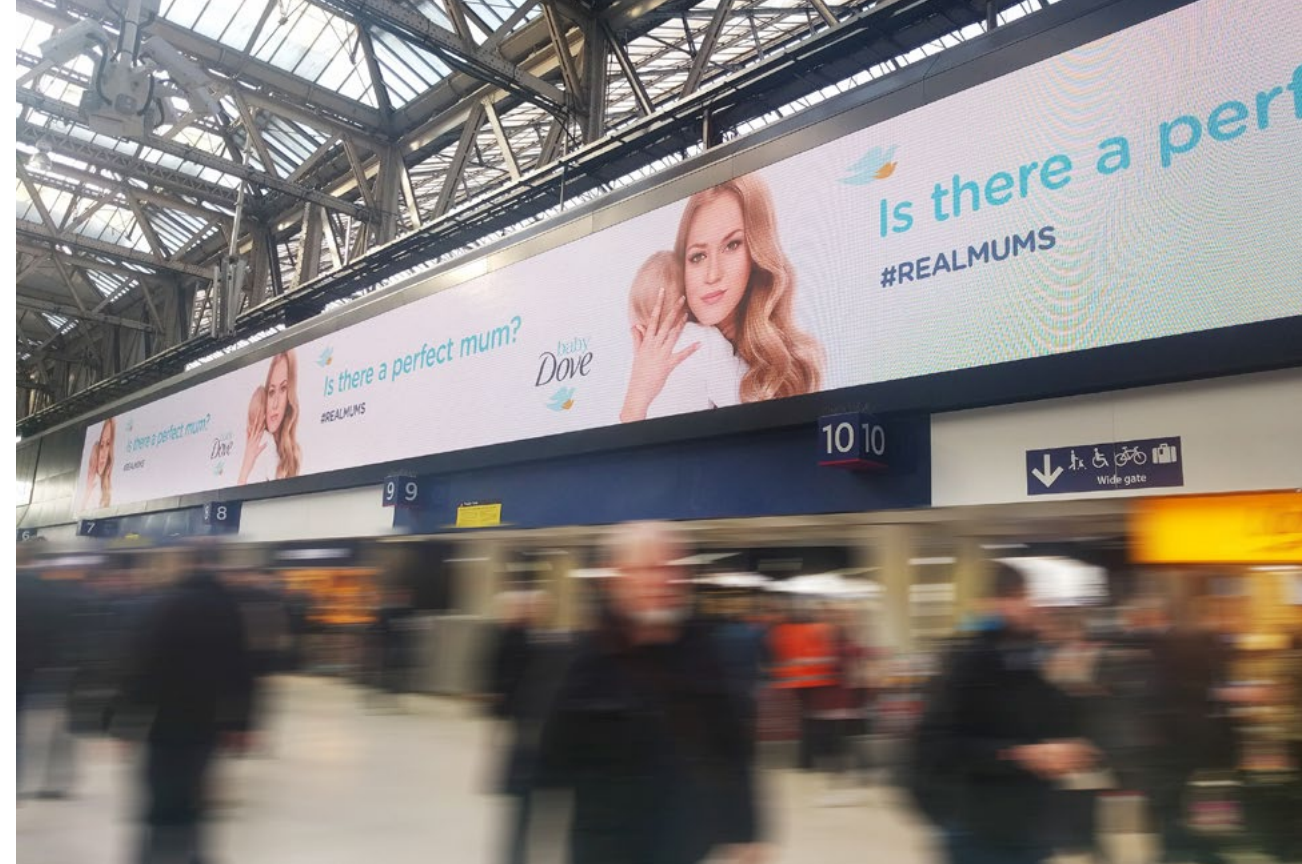
In fashion, VueModel's AI algorithms allow the user to generate on-model fashion imagery at a quarter of the cost – and five times the speed – of traditional photography.

“Zone Out” is a short film that was entirely generated by AI. Director Oscar Sharp and AI researcher Ross Goodwin created an AI algorithm called Benjamin, who handled the whole production, from script to imagery.

In the art world, “Edmond de Belamy” is one of a series of portraits of members of the fictional Belamy family, produced by three Paris-based collaborators, collectively known as Obvious. The painting was created using AI, and in October 2018, it sold at Christie's for \$432,500.

For Baby Dove's UK advertising campaign, “Real Mum,” GAN technology was used to amalgamate unrealistic depictions of motherhood in media and social networks. The AI system learned from the data it was trained on, producing an increasingly accurate sample of photorealistic images. The result was a high-quality final picture of a supposed “perfect mum.”

Understandably, fear of synthetic realities stems from the fact that they break the link between authenticity and truth, which is also fueled by broader concerns about the post-truth, disinformation era in which they are happening. While these are legitimate concerns that need to be dealt with and acknowledged, the emergence of synthetic media is simply following the same path as Photoshop and CGI: First it was scary; next it was familiar; then it was accepted. We expect a similar path here, once many of the questions and concerns are properly managed.



Dove advertising used AI to create a supposed “perfect mum” from unrealistic depictions of motherhood in the media.





This AI-generated artwork sold for \$432,500.

“While we must be vigilant about rogue users, we’re also seeing a wide range of positive applications of synthetic realities across entertainment, healthcare, mobility, security, automation, art and design.”

— What’s next?

We should be asking two questions: “What do synthetic realities mean for authenticity and truth?” as well as “As this is normalized, what are the opportunities and consequences for me?” These questions are not mutually exclusive.

In 2019, organizations must understand the technology-enabling synthetic realities, how they can be used, and their potential abuses. It could blow up in their faces if they do it wrong, as it did for The Émile Cohl art school in France. The school doctored publicity images to make its students look more diverse – and needless to say, it caused outrage. Conversely, organizations should be aware and ready in case their images are doctored by someone else, or they could have their own public relations disaster.

Brand owners will need to consider what role a brand has, can have, or should have, in a world in which we question the authenticity of everything.

Diesel tackled this head-on last year when it launched its own “genuine fake” pop-up store selling “DEISEL” bootlegs that it had made.

If a celebrity endorsement can be convincingly faked, what’s the point of having real ones anymore? If the fake is as good as the real thing, why buy the original, especially when the fake might have more cachet than the original? How can and should a brand assess the value of authenticity when the fake might be more interesting or just as valuable?

Soon, customers will expect brands to meet them halfway to supplement the realities they desire. Next, they will expect reality to adapt to them in real time without any conscious request. The shift will be from being teleported into mixed realities to becoming recipients of mixed realities



“Brand owners will need to consider what role a brand has, can have, or should have, in a world in which we question the authenticity of everything.”

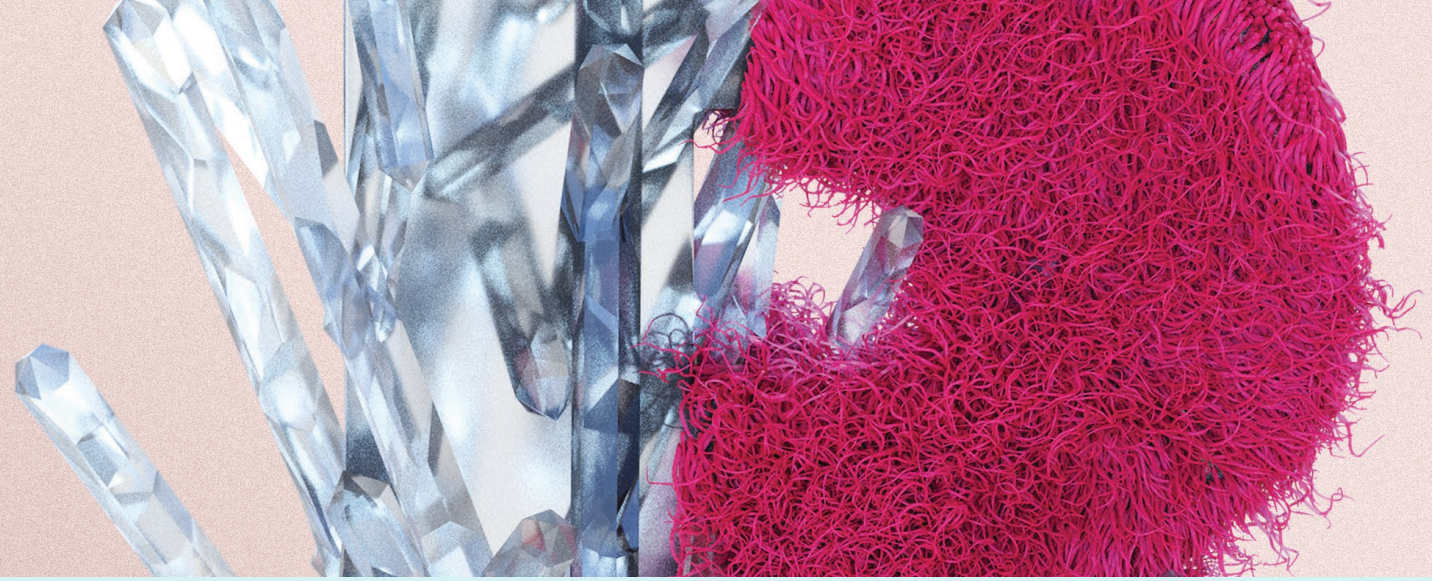
seamlessly teleported to us. And the role of designers will be to set the stage on which these experiences happen.

Most leading AI providers will soon offer tools and libraries for building AI-powered natural language generation, image manipulation and other generative use cases. This will be in addition to those already

available, such as generative graphics, photos, audio, video, text, code and materials like 3D printing and CRISPR.

In 2019, simulations will help break further ground in research and development and offer new ways to educate people and AI systems. And there will be opportunities for synthetic reality to make us better humans in the real world.

Miku is a virtual pop idol who performs as a 3D animation in front of huge crowds.



— Fjord suggests

01

Reframe “authentic”

In a world of synthetic realities, authenticity – something consumers value highly – will be more important than ever. Understand how to be authentic and communicate that authenticity effectively.

02

Be clear, be prepared

Continue to distinguish your brand by having a clear purpose and a platform that can be built from, rather than an entity that can be copied and manipulated. Be prepared for when things do go wrong, and have policies in place to handle them quickly.

03

Explore synthetic realities as a creative tool

Don’t be put off by the fear of being accused of bending the truth. Audiences already accept CGI in film; soon people will accept synthetic realities in everyday life. Once it’s familiar, no one will call it new or different or scary anymore.

04

Harness the power of AI-generated images for learning

Explore ways that this technology can be used to educate people and other AI systems in scenarios that were previously not possible. High-fidelity simulations offer a whole new way to test and train.

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