

FJORD

TRENDS

2017



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ABOUT

Twelve months of research, 1000+ cups of coffee, and probably an entire forest's worth of Post-its (don't worry—we recycle). That's what it took for us to compile our Trends 2017 report, which offers an in-depth look at the eight most important developments we believe will influence and impact design and innovation for business, government and society in the coming year.

After the seismic political shockwaves of 2016—a tumultuous 12 months in which many long-held assumptions, practices and rules were challenged—it's easy to question the role and value of predictions. However, we believe that now more than ever there is a need for Trends and the sparks of insight and innovation they can ignite.

When we produced our first Trends report in 2008, Fjord consisted of 80 designers in four European studios. We've since grown to 800+ designers and developers across 22 studios, spanning five continents, which offers us a truly unique perspective and the ability to view the world and the way it's changing from every angle.

We still apply the same process to creating and curating our trends—by running workshops in all of our studios—and now we're more perfectly positioned than ever to explore and explain emerging technologies and to identify and tackle important issues. We hope our annual report is a guide to the challenges, experiences and opportunities your organization, employees, customers and stakeholders are likely to face in 2017 and beyond.

Already, a number of emerging meta themes for the new year are clear:

FROM DESIGNING FOR DEVICE TO DESIGNING FOR ENVIRONMENT

For a decade, the smartphone has been the centre of our digital universe. In 2017 and beyond, the focus will start to shift from mobile technology (which remains the key) to the environments in which we spend our time and how best technology can be used to make them supercharged.

THE WAY WE INTERACT WITH BUSINESS IS CHANGING YET AGAIN

Live stories and short, raw content are how consumers want to communicate with each other - and it's how they will increasingly want to communicate with brands. Forget flashy billboards, intrusive direct marketing and repetitive TV commercials. Think online messaging platforms where broadcast messaging is replaced by chat. Reliance on technology to drive communications with consumers will increase. Yet as AI becomes widely adopted, the need for human intervention is still required. Furthermore, the new technology will create new jobs, whether it's bot designers, algorithm auditors, or customer fall back specialists.

THE TRUST PENDULUM IS SWINGING

Post-truth - the word of 2016 - reflects the information over-load now affecting us all. With simple facts no longer sufficient to communicate and convince, individuals, organisations and brands will have to change how they operate and communicate to build trust by demonstrating authenticity and building emotionally-driven relationships. Attention will extend beyond the customer and employee experience as organisations must master social experience.

That's the background, then. So let's now cut to the chase. In the sections that follow, we explore eight of the key trends we believe will be most important to your organisation over the months ahead. Happy reading! We hope, you will find (at least some of) the answers to the question What next? for your organization next year.



Nº1



EPHEMERAL
STORIES



Intro_

WHERE NEXT NOW EVERYONE'S A 'STORYTELLER'?

With brand strategists and content marketers preaching the storytelling gospel and the idea of storytelling incorporated into many marketing strategies across the globe, focus in 2016 shifted onto 'storydoing' – creating stories by what brands do, rather than what they tell.

In 2017, brand content will evolve further with the ever-increasing flow of communication to and from customers.

Brand owners will step back, stop driving conversations and instead make room for audiences to shape their own stories. Expect content that's more personal and instant, and expect it to play out as short stories and live video. Watch out for the 'filter paradox', as more content will be unfiltered in the traditional sense, but with filters applied camera-style.

"In most social apps today, a text box is still the default way we share. Soon, we believe a camera will be the main way that we share."

Mark Zuckerberg, CEO, Facebook

What happened_

STORYTELLING HAS NEW RULES

The days of conventional brand storytelling are over, thanks to the democratization of content creation and the rise of image over text.

The revolution began when Apple launched the iPhone 3GS back in 2009, putting low-res video recording capabilities into the hands of many. Then the proliferation of simple-to-use video, photo-editing and self-publishing tools that followed meant anyone with a smartphone or computer could publish compelling content.

And then content became king. Brands became content publishers. And being always plugged-in, consumers were always 'on'.

Today's average digital consumer owns 3.6 connected devices and spends more time on tech and media than sleeping. A hyperconnected lifestyle

is the norm, as is a shortened attention span. Even goldfish can now hold a thought for longer than humans (blame the smartphone).

As a result of this hyperconnected lifestyle, we now live in a content saturation era. The daily media content consumption of U.S. adults, recently estimated at ten hours 39 minutes, rose an entire hour in just one year.

And the nature of storytelling is changing accordingly.

Consider the decline of the voice call. In 2013, 96 percent of adults made at least one phone call per week, but this had fallen to 75 percent by 2016, when at least one global telecoms services provider was planning for voice's share of company revenue slumping from 80 percent to zero percent within five years.



Instagram

At the same time, interest in visual-based communication rose sharply.

Almost two billion images are now uploaded daily, and Google users alone uploaded 13.7 petabytes-worth of



pictures to its Photos app in 2015, including 24 billion selfies – a staggering figure, given it excludes selfies posted to Apple’s iCloud, Facebook, Snapchat, Twitter and Instagram.

There’s even talk now of a new and international visual language using emojis.

Social media players responded to images’ growing dominance, fast.

Instagram expanded its video ad offering after its video consumption leaped 40 percent between December 2015 and May 2016. Airbnb subsequently described the platform as a powerful way to “create and curate wonder and awe through storytelling that is rooted in humanity.”

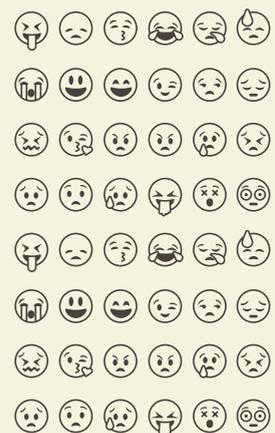
Facebook, meanwhile, began testing Snapchat-like features in its main app.

Most striking of all, though, is Snapchat.

In early 2016, Snap Inc. (no longer Snapchat Inc.) confirmed Stories (a compilation of “snaps”) was driving 10 billion video views each day; the app

then began selling ads between friends’ Stories. By the year’s end, it had declared itself a camera company with the launch of Spectacles, \$130 glasses that allow users to take a 10-second video to share with friends.

“We believe that reinventing the camera represents our greatest opportunity to improve the way people live and communicate,” it said.



What's missing_



Content saturation has become a major problem. But brand and media owners' response – to create yet more content – has been misguided. Not only is it not enough to simply produce more of the same, it's no longer just about producing high-production-value content.

We believe too many organizations remain obsessed with being a storyteller. Too few think beyond storytelling by focusing on brand drama and service experience. In fact,

storydoing has – and should have – little to do with brand. More important is how humans interact with brands.

Brand owners must drop the megaphone to fully embrace this.

“People who write novels and make feature films don't see themselves as storytellers, it's all the people who are not storytellers (who do).”

Stefan Sagmeister, Graphic Designer and Typographer

What's coming_

The eter-increasing flow of communications between organizations and audiences is creating what Kevin Kelly, author of *The Inevitable*, describes as “a state of unceasing change,” in which we are “constant ‘newbies’ – to the new.”

Already, brands have been forced to get to grips with being ‘always on’ by the constant communication enabled by Twitter. The accelerating stream of communication, plus further polarization within politics and society, will force companies to up their game.

In 2017, following the bitter presidential campaigning in U.S. electoral history and the U.K.'s polarized Brexit vote, the world will continue to feel increasingly divided. This will be exacerbated by the proliferation and ubiquity of information sources – at last count, more than one billion websites – and the side effects of the services developed to

meet growing demands for information delivered more efficiently.

More of us are turning to social media and aggregation sites to navigate the noise. According to Pew Research Center, 61 percent of millennials use Facebook as their key political news source. Yet, curated feeds are self-affirming, and closed-loop systems like recommendation engines and algorithms feed the perception that the world agrees with our point of view.

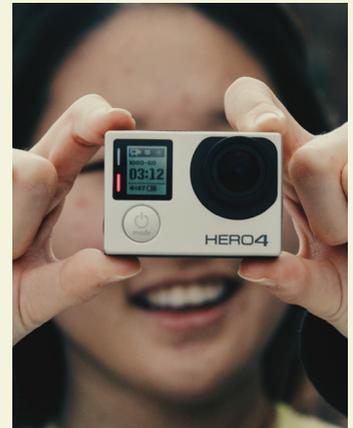
In fact, Facebook is deepening millennial users' confirmation bias; if we only get our political news from Facebook, we are not exposed to as many diverse and different opinions, factors or views. Worse, many now believe we are living in an era of ‘post-truth’, a term recently declared by Oxford Dictionaries as its word of the year.

We will need powerful stories that cut through, unite and overcome a so-called content

shock, the point at which too much content makes content marketing, in its traditional sense, no longer sustainable. After all, each of us only has a limit to the amount of content we can consume.

To stay relevant, organizations should work harder to meet their audiences where they are. Their storytelling strategies will become more nuanced than simply creating bite-sized, snackable stories. Brands can no longer simply hover around social media sites, and call it a day.

Instead, they must ready themselves to cede storytelling power.





Snapchat Spectacles

How to respond_

Brand owners must heed three key lessons from content saturation:

First, just because you create content doesn't guarantee an audience. And even if you have an audience, they can easily tune you out with the click of an ad-block button.

Second, success is not always driven by the highest production-quality content. Brand owners love glossy content, but they will have to get over themselves if they are to fully embrace consumers' growing preference for content that is rough and ready.

Snapchat's growth has been powered by the steady rollout of new and enhanced features, including Snapchat Stories and Discover, fueling predictions it will have 217 million users by the end of 2017. And all this with little high-quality content.

In fact, one of Snapchat's signature products, Live Stories, is a compilation of scappily stitched together photos and videos built to

deliver raw, unrehearsed, unpolished content. Now, Live Stories' popularity has prompted other social media channels, including Instagram, to follow suit with their own versions of imperfect sharing.

Third, live rocks.

After Twitter bought live streaming video app Periscope in 2015, live video gained massive momentum, and the upsurge of real-time, unedited visual content that followed has put pressure on all organizations creating content to step up or risk getting left behind.

Brands must stop trying to drive the conversations. They must shift the spotlight from themselves onto their audiences, letting the consumers become lead characters in the brand's stories. To do this, organizations must co-create conversations in real time alongside employees, influencers, subject matter experts, customers and their extended communities.

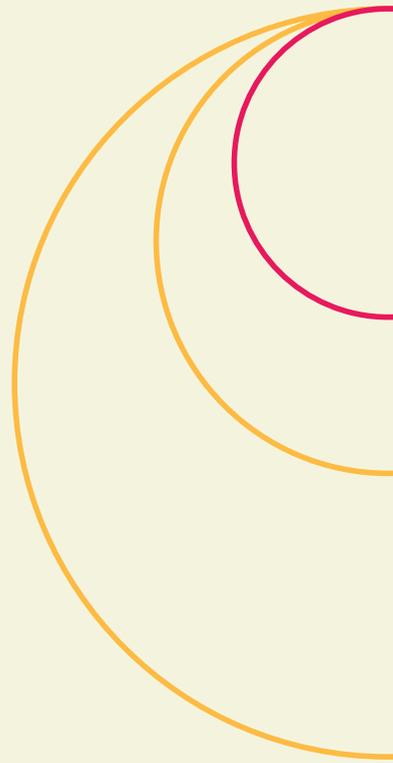
And it will be essential to embrace the messy art of short stories and live video.

Leading the way will be those organizations unafraid to integrate consumers and employees into the heart of their communications strategies.

U.S. fashion brand Everlane, for example, is using Snapchat to humanize and personalize its offering with behind-the-scenes content. Snapchat enables the business "to explore transparency in a completely new way," the company wrote on its blog. "No fancy cameras. No editing. Just raw, live footage. It's beautiful, and it's the platform for the modern generation."

Fox TV, meanwhile, offered Snapchat activation codes to support its recent U.S. TV premier of *The Rocky Horror Picture Show* remake, enabling viewers to unlock exclusive filters and share their own stories during the broadcast of the show, a TV first.

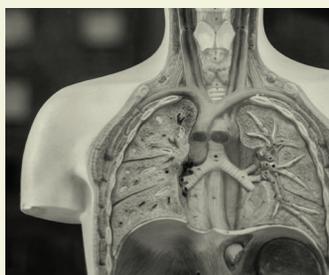
Fjord suggests_



FROM STORYTELLING TO STORYDOING

When conventional brand storytelling is dead, success will depend on putting people at the core of everything you do. A human-centered design approach is a powerful framework for creating compelling content.

Remember, a content marketing program takes time to monetize, so give your content time to fulfil its potential ROI.



RE-MODEL YOUR MARKETING TEAM TO FOCUS ON STORYDOING

To move beyond an insular brand-centric content marketing strategy, focus on your people first. Giving your audience the reins to shape and participate in their own stories with your brand requires human-centered thinkers, so look for people like journalists and UX content strategists, who have a 'for the people' mentality ingrained in their DNA. Challenge your marketing department to become orchestrators, not creators. And ensure they have the skills they need to do so, brilliantly.



BE LED BY YOUR AUDIENCES' NEW NORMAL AND THINK ABOUT YOUR BRAND AS 'LIVING'

Your first step should be to define what type of content marketing strategy aligns best with your audiences' behavior and needs. Assess how communication norms are changing - the use of filters, for example, and trending toward live - and appropriately apply this to your own communications across the whole range of contact points.



Snapchat

Brand owners must drop the megaphone

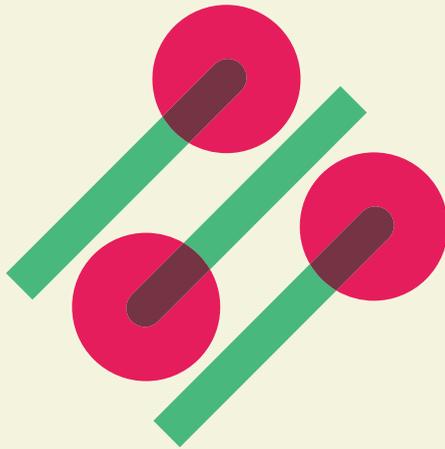
NURTURE YOUR CONTENT

Make sure you have the team and infrastructure not only to test and iterate content that's in development, but to also test, iterate and govern content post-launch. Be comfortable with ambiguity, and embrace the art of experimentation. And for the love of compelling, usable content experiences everywhere: don't just launch and leave it.





Nº2



SHINY API
PEOPLE



Intro_

REWIRING FOR INNOVATION

The greatest challenge for any organization in today's digital world is how best to manage and respond to change. The answer is to bring user-led innovation to market, fast. But that's easier said than done. Though large organizations typically know how to scale, they struggle to be agile. While startups tend to excel in agility, yet rarely succeed in scaling up. Success lies in understanding that digital innovation provides the key to effectively tackling both.

Many organizations have begun to break down silos and build spaces to inspire creative thinking. Last year, we highlighted the importance of Design From Within. This year, that trend has evolved rapidly. Businesses will need new strategies to take this further. In 2017, organizations will acknowledge the need to rewire completely to become more people-centric. They will do this by upscaling the principles and practices of digital design to create the fertile ground needed for organization-wide flexibility.

What happened_

THE INNOVATION CRISIS: HOW TO INNOVATE AT SCALE

Digital technology has transformed the way products and services are created, distributed and consumed.

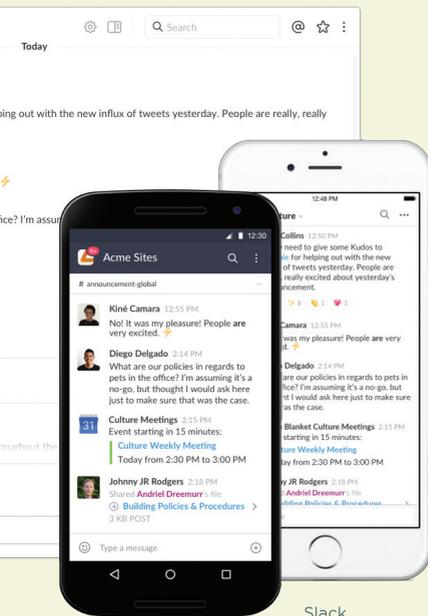
The internet brought about unprecedented choice, reinventing routes to market and rewriting the relationship between product or service provider and end user. The smartphone created an on-demand world of liquid expectations for magical user experiences that transcended traditional boundaries. And then, both ushered in a new generation of 'living service': contextually aware services that react in real time to respond to individual needs.

In response, many organizations set out to acquire or build the design skills needed to develop these services.

In 2013 Cisco, for example, established a corporate venturing program for startups and scale-ups called Cisco Entrepreneurs in Residence. Since then it has helped grow more than 27 small companies whose ideas align with the interest of its business units. Others, meanwhile, addressed some of the issues that can hold back effective design. At Accenture, growth came from embracing design and design culture through a series of strategic acquisitions.

Yet by 2016, a bigger problem had become apparent. Organizations were facing a sort of crisis in innovation. Many were struggling to innovate at all, and among those that had, the next challenge was how to innovate at scale.

Design and innovation are not the same, but they are



Slack



Zappos

inextricably linked. Design is often used as a process to drive innovation, and design thinking is seen by many as a requirement for a company to be truly innovative. Innovation is, of course, possible without a design process, but it is probable with one.

There has been a lot of recent talk of design thinking; many organizations have appointed chief design officers, acquired design agencies, and set up internal design teams and innovation hubs, hackathons, startup collaborations and co-creation workshops. But none of this has been enough, because effective innovation at scale depends on more.

Design thinking is still important, but it is only the beginning: a catalyst.

Just as important is how an organization puts this theory into practice – in other words “design doing.” And this, in turn, is only effectively achieved when organizations self-optimize by cultivating an appropriate design culture to enable the best design work.

Innovation cannot happen in pockets. Instead, an organization-wide rewiring for innovation is required.

Last year, we saw businesses break down silos and create spaces (often called innovation units) both inside and outside the organization. And this has been an important first step. But what’s needed next are organizational strategies that will foster smarter humans and release combined human potential.



Microsoft

What's missing_

Siloed innovation hubs where small-scale experiments take place do not make an organization innovative. Organizations need to innovate more significantly and more quickly, and to do so, they need to live and breathe innovation across the entire business.

Though many organizations have invested in establishing their own studio or lab, the challenge they all face lies in scale. Separate, siloed teams experimenting and developing ideas for a specific channel or service

have had some success, but attempts to replicate that success on a bigger scale have often failed.

All too often, strategies have lacked a solid road map for change, along with the vision, commitment and agility required. An organization, its platforms and its governance models must all be ready to scale. This doesn't just take planning; it takes a new mindset and the total rewriting of what success looks like at a corporate scale, particularly from the human perspective.



What's coming_

Expect to see new strategies to ensure everyone fosters creativity and innovation.

Eventually the role of chief digital officer – many of whom are still defining their role – will become obsolete as digital is embedded throughout every organization. For the same reason, innovation hubs will also become redundant. Organizations most willing and able to rewire the entire business to create a living, breathing innovation culture will be best-positioned for future success.

Already, organizations are tackling this challenge in a variety of ways.

Under Larry Page's leadership, Google started designing good-looking apps that, for the first time, looked like they belonged to one

family. C-suite support, willingness to invest and strategic commitment created a program that optimized design doing by enabling employees (rather than forcing them) to become more design-driven and therefore innovative. At financial software giant Intuit, a D4D (design for delight) program involved training and cultivating a community of 200 innovators – which ran 1,000-plus workshops over five years to change the way people work across every function – in pursuit of creating new and innovative products for Intuit's customers.

By becoming design-driven, Intuit shifted from what one senior executive has described as “the best-run, no-growth company in the Valley” to “a 30-year-old startup.” And

revenue was \$4.7 billion for the year in July 2016 – up 12 percent.

At Ford, everyone – from first-year, entry-level research assistant to managing directors – can now bring an idea to the company, have it heard and get it patented as part of an initiative that has tripled the number of inventions the company has received from across its business since 2012.

If Ford sees value in an idea, it will help an employee turn it into reality, providing a three-month subscription to TechShop, an open-access workshop studio, to encourage the employee to prototype the new idea. In 2015, its employees submitted 6,000 ideas for patent consideration, up from 4,000 the year before.



FedEx

At FedEx, emotional intelligence training for new managers has strengthened its people-first leadership, an important building block for an organization to become truly innovative. Meanwhile at Zappos, hierarchies have been flattened and old silos dismantled to encourage every self-managed team member toward more innovative thinking.

Netflix's focus on fostering innovation has helped it secure more than 81.5 million subscribers. All staff are actively encouraged to think like business innovators,

and a culture of creativity, self-discipline, freedom and responsibility reinforces this. While other organizations implement processes to avoid the chaos that comes with growth, Netflix's approach is informal and relies on self-discipline to avoid chaos – the self-discipline that enables and attracts creativity. It aims to increase employee freedom as the business grows, and Netflix believes this is the best way to attract and nourish the innovative people whose shoulders its ongoing success depends on.

Expect more of this in 2017 and beyond.



Google

How to respond_

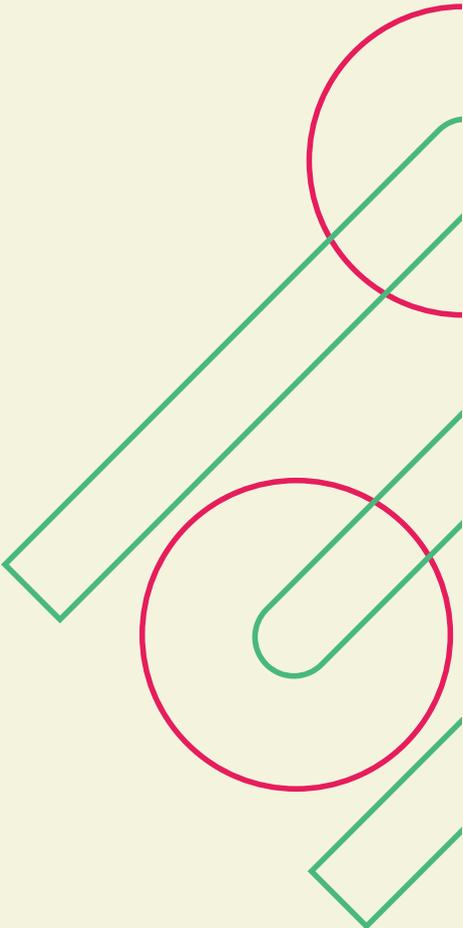
Design helps to find truth and provides a needed map in the chaos. This is why we are seeing so much focus on it.

A design process in place will help turn possible innovation into probable innovation. But upscaling the principles and practices of digital innovation across the entire organization is now critical. This will take no less than CEO commitment and a clear plan for how each organization can change its own culture. Fjord calls this approach Living Business, and we have established a methodology on how to get the very best from your people and culture.



Netflix

Fjord suggests_



CHANGE SHAPE TO INNOVATE

Digital transformation requires total organizational commitment, and this means a willingness to change procedures and policies. We believe that a new mindset, a clear framework for change and the goal of scalability from the outset are essential, along with a commitment to reconsider what success looks like for your business. Fresh KPIs might be needed, including time to impact, organizational agility, internal NPS or the Living Business Vital Signs we have developed at Fjord.



Microsoft

PEOPLE ARE YOUR IP AND API

Remember, people are your IP and your API, so make the most of them. Place users center stage. Allow employees to shape your organization's future, enabling them to become - in effect - the new CEO. Invest time and resources in training people to learn new cross-discipline skills. Embed cross-functional teams to sustain the innovation enabled by more agile workflows that bring new ideas to market, faster.



AIM TO SCALE FROM DAY ONE

A solid plan to upscale innovation is a challenge. Start with a framework idea. Ensure your platforms, governance models and organization is also ready to upscale. But don't fall in love with your plan. The service, market or ecosystem in which you operate might radically change, but with a framework that is flexible and agile, each or all can do so without compromising your basic principles for scalability.

*Smarter humans,
combined potential*

REVIEW YOUR TOOLS

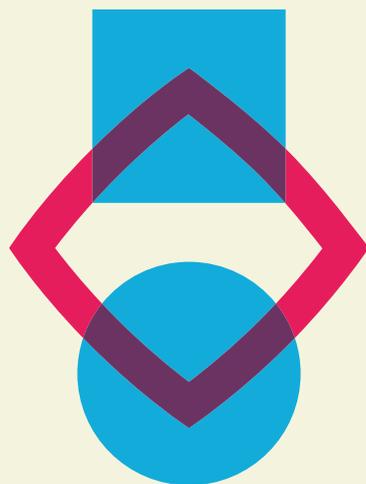
New technology and simplified collaboration tools such as Slack, Workplace by Facebook and Microsoft Teams are making innovation accessible and possible across an entire workforce, not just within an innovation hub. Reassess your tools and, where needed, upgrade them. Simple and collaborative tools used by consumers to interact with each other impact the workplace, so capitalize on this.







№3



BLURRED
REALITY



Intro_

BEYOND

AR VS. VR VS. MR



Augmented reality and virtual reality were among the most talked about developments in 2016. It was the year Pokémon GO became a global phenomenon, bringing mixed reality (MR) to the mass market - a real tipping point. It was the year Oculus Rift was finally released, too.

In 2017, as MR moves toward the mainstream, organizations will turn away from single, siloed, enhanced reality experiences to focus instead on harnessing and combining all types of reality - enhanced and real. They will create singular, integrated and compelling experiential platforms on which to build experiences that we call blurred reality.

What happened_

ENHANCED REALITY GOES MAINSTREAM

After years of hype, VR finally entered the mass public consciousness.

Consumers had access to a wide variety of devices, from mobile-based systems, – such as Gear VR and Google’s Daydream View and Cardboard, – to full-featured, tethered, head-mounted displays like HTC Vive and Oculus Rift. And many interesting VR applications emerged.

VR production startup RYOT created experiential documentaries that put users at the heart of the refugee crisis, while a powerful VR experience by The National Autistic Society in the U.K. enabled users to understand better what it’s like to be an autistic child. Lockheed Martin, meanwhile, launched “Mars Experience Bus,” an immersive school bus in which children explore the red planet’s surface via VR.

Yet, despite the undeniable advances made in VR, applications were limited by



Lockheed Martin



Rebecca Minkoff

the closed nature of the technology itself. The battery life of current mobile devices restricts running a VR experience to just an hour. And a tethered device like Oculus Rift, though more powerful in terms of computing power, cannot yet be easily worn as you go about your day.

Because of VR's limitations, interest in AR also grew rapidly throughout the year, as demonstrated by the mass adoption of Niantic Inc.'s Pokémon GO. This proved that people would use an AR-driven app – and at a considerable global scale. Equally important to note (especially for retailers) is that Pokémon GO took consumers past an acceptance tipping point. People now understand there is a new layer of reality all around them, and they are prepared to try it.

Fashion designer Rebecca Minkoff deployed VR and AR as part of her 2016 fall show. To enable potential customers to connect with the brand, users could upload a photo of themselves, pick out clothing from the show, then see those clothes layered over their bodies using the image they chose; the experience was powered by technology app Zeekit.

AR applications weren't just limited to the gaming and consumer marketplace. In manufacturing, several striking innovations hit the shop floor.



DHL Glasses



Microsoft HoloLens

Interconnect solo experiences

Industrial software company Vuforia began using AR to contextualize the internet of things. Its scannable 'ThingsMarks' sticker labels, which were put on industrial machinery parts, enabled operators to access product and maintenance information from a central database – all via an AR headset and Vuforia smartphone app.

Similarly, German elevator manufacturer thyssenkrupp armed its field repair workers with Microsoft HoloLens goggles to see what went wrong and how to fix faulty, I-o-T-connected elevator equipment.

By the year's end, work was advancing to overcome VR's limitations. Google

revealed Daydream View – its standalone VR headset – and soon after, Facebook demonstrated a new, untethered prototype headset for a wireless version of Oculus Rift.

With consumers' growing confidence in these new, experiential technologies, talk among analysts positioned enhanced reality as the next big thing after the smartphone.

Investors seemed convinced of the technologies' prospects too, having made 225 venture capital investments worth \$3.5 billion in the preceding two years. Meanwhile, Goldman Sachs estimated VR and AR would be worth \$80 billion by 2051.

What's missing

Many organizations' approach to developing AR and VR experiences remains siloed in instigation and application - treating VR, for example, as a single experience a user has while wearing a VR headset. Worse, many of the experiences they create lack integration within a larger, experiential context.

Hardware companies are tackling the limitations of these technologies. They are untethering VR and addressing AR challenges, such as rendering digital data into meaningful graphics and scaling it to fit the perspective of the visual field. And as they do this and unlock a wealth of new opportunities, we believe organizations must upgrade their strategies to keep pace.



Magic Leap

What's coming

The evolution of enhanced realities such as AR and VR during 2016 was impressive. But by the year's end, many organizations were already adjusting their sights to focus on where the real magic will happen: the point VR and AR meet to form mixed reality.

A great example of this is the development of HoloLens, a lightweight headset comprising MR sunglasses that augment reality. Rather than blocking out reality, as with VR, it brings high-definition holograms to life in the user's world. And then there is Magic

Leap, described by some as "HoloLens on steroids," which overlays VR on the real world via semitransparent goggles.

Executives at Oculus Rift made it clear that a move to AR is part of the business's long-term strategy as the VR platform becomes more connected to the real world. The company also confirmed plans for 100-plus new jobs as it gears up for AR expansion. More explicit, however, was Facebook's description of Oculus Rift's new headset prototype as offering a form of "augmented virtual reality."

The future of how people interact with their computers will center around how VR and AR experiences seamlessly integrate into our daily life. Alibaba in China has just launched a virtual shopping experience that allows you to buy products in New York department store Macy's, thousands of miles away.

Today, individual apps live on your computer or phone. Tomorrow, data will be received seamlessly without users having to worry which apps need installing or where data is coming from. And in



How to respond_

In 2017, more MR applications will emerge, enabling brands to create experiences that seamlessly shift between the physical and digital worlds and channels. We believe organizations should use these applications to create singular, integrated and compelling opportunities for new experiences for how we live, work and play.

Designers must create singular experiential platforms on which to build integrated blurred reality experiences. And the best partners to achieve this will be those with deep experience of working with both virtual and mixed reality devices, 3-D design and development, game creation and simulation.

"We should (all) build software and experiences that follow the way our minds work and the way we process the world."

Mark Zuckerberg, CEO, Facebook

this way, tomorrow's apps will truly become integrated into a user's everyday life.

A move away from individual apps has become evident, which we highlighted in our 2016 Trends. Consider how Google Assistant and Apple's Siri can pass through requests and build out results based upon context and compatible applications, while Android Instant Apps loads up a temporary version of an app instead of going to a webpage.

User interfaces and interactions will be limited

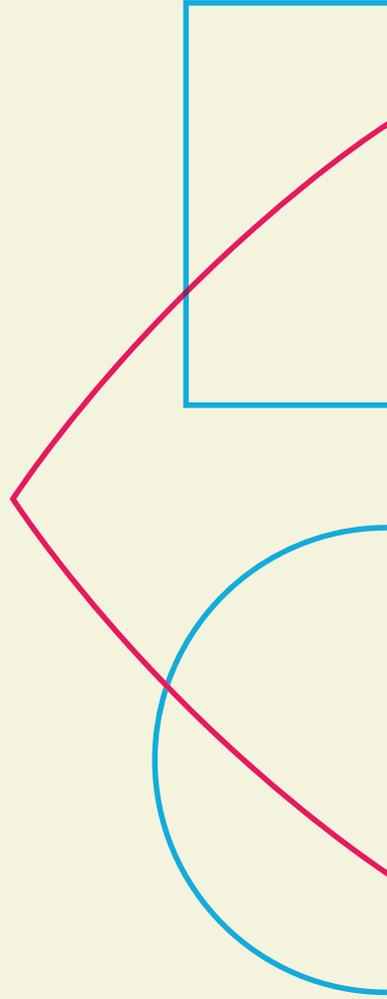
to get the most out of these emerging technologies. And more personal experiences will cater to individual tastes.

Some people will interface with their devices via light and portable, head-mounted displays that will overlay 3-D data wirelessly gathered from the Cloud onto their lives. And a world of new opportunities will emerge once technology has evolved to this point. But others will use their phones or cars to see hidden content linked to their surroundings rather than visit apps.



Microsoft

Fjord suggests_



NO LONGER CAN EVERY APPLICATION BE A SOLO EXPERIENCE

The key to designing for this new MR world will lie in building blurred reality experiences capable of being integrated seamlessly into users' lives.

No longer can every application be a solo experience. Instead, you should consider the potential to interconnect with various services and experiences in order to create a single platform.

Existing ways a user interacts with AR, VR and MR experiences – through controllers, gestures, gaze and voice controls – will need upgrading. As a user will have to interact within a virtual 3-D environment, new paradigms of user interactions and interface designs will be required.



Microsoft HoloLens

RECONSIDER THE ROLE OF MR

Virtual reality and augmented reality have made the greatest impact so far in entertainment. But this merely scratches the surface of these technologies' potential. With the best bits of each combined to create MR, brands dismiss the wider applications of each at their peril. MR has huge potential for audiences of all types, including customers and employees. And it has a diverse array of uses including brand building, service provision, education and cost saving, as already demonstrated by Vuforia and thyssenkrupp in the workplace.



CHOOSE THE TECHNOLOGY MOST FIT FOR PURPOSE

Expect to see a split between highly sophisticated, dedicated, immersive experiences and more fluid experiences without any need for dedicated kit or specialist apps. The former would have clear focus: training for fighter plane pilots or brain surgeons, high-end gaming and so on. The latter would be easier to integrate into other services and experiences. Ask yourself: Which suits my service and users?

RETHINK YOUR BRAND'S DIMENSIONS

MR gives brands the ability to immerse consumers in rich content, enabling them to elicit feelings and form connections that have previously been difficult with existing technology. In this situation, where your experience is your brand, organizations will be forced to reconsider, expand and develop the notions of their brand's personality and how it is conveyed in this new format. Building on this, brands will be able to elicit feelings that help them reach their core objectives. Holiday providers could create strong feelings of relaxation, pleasure or excitement to drive bookings, just as charities drive donations and awareness by using VR to create a sense of empathy.



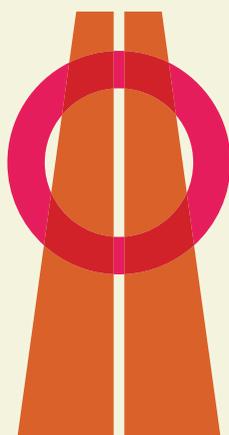
Samsung Gear



HTC Vive



№4



WORLD ON
WHEELS



Intro_

GO SLOW TO GO FAST

Self-driving cars, also known as autonomous vehicles (AVs), are so close to becoming part of daily life that, given the time it will take to prepare, every organization must consider how to respond. And those institutions that proactively start the work now will reap massive opportunities. Those that don't, on the other hand, can be left behind.

AVs will redefine the automotive industry, and those organizations impacted by the shifting landscape will have to deal with the changing business models and customer expectations they bring about.

In 2017, as businesses explore a new generation of mobile services, they will turn their attention to cars, viewing automobiles as a connected mobile environment in which things happen via multiple devices. And the ambitious will explore ways to integrate experiences between car and home.

"The car is growing beyond its role as a mere means of transport and will ultimately become a mobile living space."

Dr. Dieter Zetsche,
CEO, Mercedes-Benz

What happened_

AVs HIT THE ROAD... AND REDEFINE 'CAR'



Google

Automated cars capable of sensing the environment and navigating without human input have been the stuff of fantasy. But not anymore.

Over the past twelve months, Google ran high-profile tests of its first self-driving car. In Singapore, nuTonomy launched the first public trial of a 'robo-taxi' service, involving specially configured Renault and Mitsubishi AVs and a ride-hailing smartphone app. And Uber began operating self-driving cars with backup drivers at the wheel in Pittsburgh. Uber's self-driving truck also made its maiden voyage to deliver 50,000 beers.

In autumn 2016, the U.S. Department of Transportation's National Highway Traffic Safety Administration unveiled the first federal policy on AVs, which included six different levels of autonomous driving guidelines. Defined by the Society of Automotive Engineers International, the guidelines ranged from no automation (level 0) to conditional automation all the way to full automation (level 5). This essentially set the first official performance standards for self-driving cars and will inform how states can legislate AVs.

There were many other significant developments, too.

General Motors invested \$500 million in Lyft, purchased self-driving technology startup Cruise Automation for more than \$1 billion and then announced plans to build its first self-driving cars for use within the Lyft fleet as self-driving taxis.



BMW announced it would have a self-driving car on the market within five years. Ford promised a fleet of autonomous vehicles on the road by 2021. And Tesla revealed that all new vehicles will have hardware that will eventually enable full autonomy; they're also planning for an AV ride-hailing service called Tesla Network, which will likely give Uber a ride for its money (no pun intended).



Meanwhile, new startups took on established players with agility, flexibility, vision and superior technologies. London-based autonomous-driving

From device-specific to environmental focus



startup FiveAI, for example, promised to use more sophisticated machine-learning to deliver fully autonomous vehicles to the market by 2019, two years ahead of BMW and Ford.

Other organizations also formed new alliances, paving the way toward a next generation of connected and integrated in-car services. Uber and Spotify, for example, joined forces to allow passengers to personalize their Uber ride by remotely controlling the music via the Spotify app. Uber and Starbucks then struck a deal to offer U.S. passengers a 20 percent discount if they used an Uber to go to a Starbucks.

By the year's end, Florida's Department of Transportation had also begun assessing the implications of AVs' potential impact on public services, ranging from on-street parking spaces to future city planning, to the redevelopment of vacated parking lots.



What's coming_

Many car drivers exceed the speed limit. They do so because, traditionally, cars represent unproductive downtime for drivers. This has a ripple effect, including increased fuel consumption, higher risk of car accidents and unpredictable traffic patterns.

AVs will change all this. Traveling by car will no longer be unproductive. In fact, your journey by AV might be the quietest, most uninterrupted, fruitful time of your day.

The implications and opportunities AVs will raise are seemingly endless.

Consider the in-car experience. AVs will redefine the car as something more than a vehicle to transport you from A to B. Automation will make the car a completely different environment – a new platform, even – and provide an opportunity to reimagine who to have in it and how to use it.

Consider mobile hotel rooms: Will you take the Marriott or the Yotel AV to your destination? If so, are you hungry? Dining is a huge focus in the airline sector, so expect in-car dining to be revolutionized, along with roadside eating and fast-food joints.

And if you can enjoy a great meal in-car, why not drinks and a movie? With the right in-car experience, you won't think twice about embarking on a 200-mile road trip to see your favorite music artist or sports team. Basically, the whole

experience of going to events, along with the events sector, could be impacted, too.

The total number of miles driven is already expected to skyrocket. A KPMG report predicts that by 2050, cars in the U.S. alone will travel one trillion more miles each year. But that's before taking AVs into account. If self-driving cars take off as widely as they're expected to, demand could be twice that.

When car time is no longer synonymous with pointless downtime, cars won't need to go so fast. This will mean commuters will have more time to work, video chat and engage with new products and services.

Many services could fill this extra time. Imagine an AV-maker's branded financial planning service, for example, or in-car hairdressing or pedicures. In the self-driving future, cars are the new arcades', Wired recently declared. In-car mobile internet interaction will soar, creating new digital revenue opportunities, and telcos and entertainment companies will deliver a new generation of in-car services.

AVs will rewrite the rules of car ownership. Car buying may slow, as consumers try fractional ownership of an entire car brand that appeals to them. So, rather than buy a Ford Focus, a consumer might buy into Ford to access different models that meet their specific needs at different times, which will delay full car ownership.

Expect brand architectures to change with all but the strongest automotive sub-brands falling by the wayside

What's missing_

In 2017, the latest wave of next-generation vehicles will establish the AVs' foothold in all our futures. Given the lead times required, organizations should think now about their role in an AV world, or else they will lose out.

For a while, AVs will redefine automotive services and the industry as a whole. With vehicles affecting so many other aspects of consumers' existence, organizations will have to deal with the impact they have on the economy, mobility and society.

as consumers buy into master brands instead of an individual model.

AVs will change business models, too. With new offerings already emerging – premium car-sharing service ReachNow from BMW, for example, combines service elements of Airbnb, Car2Go, Uber and ZipCar, while new pay-per-use models include carpooling, ‘e-hailing’ taxi alternatives and peer-to-peer car rentals – others will follow.

AVs will change the car service landscape. As experts in AV technology, AV manufacturers will dominate maintenance, service and repair. Insurers will have to adapt and start insuring car manufacturers from liabilities associated with technical failure.

Infrastructure adjustments will also be needed. As AVs will reduce the risk of speeding penalties, revenue generated from fines to reinvest in road maintenance will dramatically fall. Fewer garages, private and public parking spaces will be needed – something companies with large parking lot acreage should be factoring into long-range estate strategies today.

City planners, meanwhile, may need to rezone urban areas to take advantage of new space. And health care providers will need to reassess provision levels in the light of an anticipated decrease in road traffic accidents.

Even non-automotive companies’ supply chains could need adjusting in response to AVs’ greater flexibility and improved efficiency.

Finally, expect AVs to have an impact on other emerging technologies – triggering new developments around in-car Voice User Interface (VUI), for example. To date, in-car VUI has not flourished due to concerns over the extent to which they distract drivers. But as in-home VUIs such as Amazon Echo and Google Home establish a foothold in the consumer marketplace, early frustrations with in-car VUI will soon fade.

Integrated ecosystems will enable AVs to be controlled by simple voice commands and to communicate with in-home systems to optimize the household environment ahead of the traveler’s return. SmartDeviceLink technology (SDL), an initiative by Ford-owned company Livio, aims to standardize and integrate the many connected interfaces being used in cars, providing drivers with a convenient and responsible way to remotely access all of their most frequently used smart home devices (thermostats, locks, lights and so on) while on the road.

AVs are also likely to accelerate the development of robotics for an array of consumer

applications with many (recharging stations service centers, and so on) sharing the same or similar infrastructure.

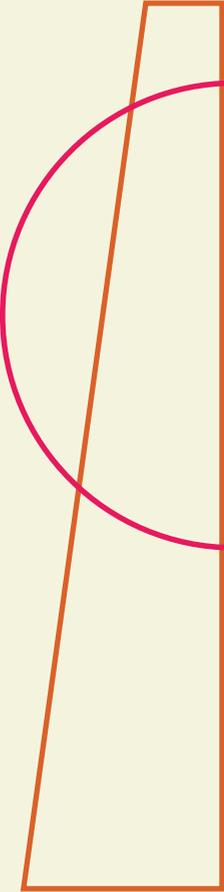
How to respond_

In the past, car ownership was an end unto itself, and the focus of automotive manufacturers was simply to get people into their vehicles. Looking ahead, manufacturers should think of their products as nodes in an ecosystem: just one choice among many in a more flexible, fragmented future where everything – power source, service partnerships, ownership structures – is up for grabs.

AVs will redefine the automotive industry. But with vehicles impacting so many other aspects of consumers’ existence, AVs’ impact on the economy, mobility and society as a whole will be far and wide-reaching. And with the human behavioral shifts that will drive (and be driven by) AVs’ development, organizations must adjust their strategies accordingly.



Fjord suggests_



DESIGN PHYSICAL EXPERIENCES THAT FIT THE DIGITAL EXPERIENCE

Organizations not currently working on their role in an AV world will lose out, as these next-generation vehicles establish their foothold in our automotive future.

An immediate priority is to understand the emerging opportunities and prioritize what you are best-positioned to deliver. But to do this, you must first understand what place you will have in this brave new world.

A key shift must be away from a device-specific approach focused around the smartphone and toward an environmental focus in which in-car – just like we will see in-home – will be serviced by a new generation of connected and interconnected digital services purchased, managed and delivered via multiple devices.

Design focus must shift from designing digital experiences that fit the car to designing physical experiences that fit the digital experience.



Uber

DON'T POSTPONE FIGURING OUT YOUR PLACE IN THE NEW WORLD

The relationship between car and user will change fundamentally when the user does not drive. If this happens in the early 2020s, as some suggest, any mid- to long-term investments – real estate, for example – that are made now will be impacted. The car will become a platform for a new generation of digital products, services

and user experiences which will shake up infrastructure. Understand what role your business will play in this new automotive ecosystem. Don't just think about your future role; start forming partnerships now to create services. The best time to scale and monetize services and partnerships is as AVs take off, not after.



nuTonomy

DON'T THINK 'CAR'

The car is no longer an end unto itself; it is an integral part of a connected ecosystem and increased connectivity will open options for experiences and services that challenge the very notion of 'car'. Analyze the new patterns in consumer behavior and expectations to identify the new opportunities. Decide what experience you want to deliver, and then do so, brilliantly.

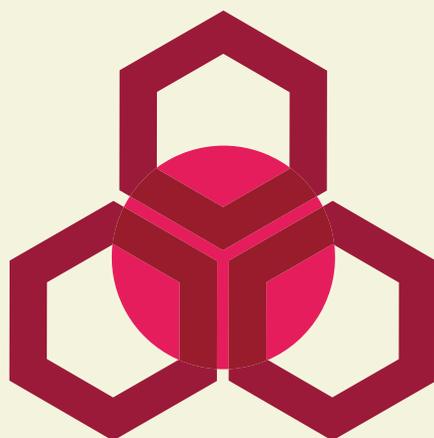


RE-TOOL AND BE AGILE

Automotive manufacturers will need to think more like researchers, act more like experience designers and code like software companies. And they must brace for the bumps, as the road to the future will be bumpy. Changes in structure, process and design will be needed, which, in turn, usher in a new era where available automotive options will extend far beyond "any color, so long as it's not black."



№5



HOMES WITHOUT
BOUNDARIES



Intro_

DOMESTIC HELP FINDS ITS VOICE

The connected home is now reality, but it doesn't feel all that smart. With the launch of Google Home, Amazon Echo's emergence into the mainstream and steady growth for Wi-Fi-enabled domestic controllers such as Nest. But it was also the year that a commoditized approach to introducing connectivity to household objects became evident.

In 2017 and beyond, organizations should look beyond device-centric strategies to focus instead on designing and serving home experiences that better meet individual householders' varying wants and needs. These services will add value within seamless experiences that play out across traditional boundaries and are highly personalized.

What happened_

CONNECTED, BUT NOT THAT SMART



Futteralhaus

The connected home, a home experience augmented by smart technology, is a concept that dates back to the 1960s when Jim Sutherland, a quiet family man from Pittsburgh, designed and built the ECHO IV, a computer system designed to control many aspects of his home with his wife and children.

Five decades later, Sutherland's dream is fast-becoming reality.

In early 2016, Facebook CEO, Mark Zuckerberg, announced he'd begun developing his

own artificially intelligent personal assistant to handle everything from playing music and identifying friends at the front door to baby monitoring and virtual reality data representations.

By the end of the year, Amazon Echo was managing a growing number of householders' shopping by voice control, Google had launched a major rival in the form of Google Home, and a plethora of other companies were turning everything from lights to kettles on and off remotely.

Yet, it was also becoming clear that the automation enabled by connected devices was not enough.

In Italy, a two-year pilot project called Casa Jasmina is going beyond mere automation by providing a test bed for the development of a next-gen, open-source, connected home services.

In Germany, Futteralhaus is a proposition to design and sell compact, pre-built smart homes blending innovative smart technologies and natural building materials with minimalist design. The homes create and sell renewable energy to the grid, and buyers can rent them out and control the process via an app.

Futteralhaus highlights a second important aspect of the connected home that has so far been underplayed: the fundamental shift connectivity has brought about in our understanding and attitude toward home.

By 2016, home was no longer a passive receiver of gas, water, electricity and information from the outside world. Rather, it was fast becoming an active generator and distributor of all via the grid.

Against the backdrop of an upsurge in new wind, solar

and hydro plants capacity, leading utilities companies were exploring new methods to store and distribute energy, along with a new role guiding customers toward local production and helping them distribute it.

Home is also extending beyond the physical.

Not so long ago, household internet connections enhanced the domestic tasks conducted at home. Now, our ability to conduct these same activities anywhere is raising expectations of home services and ubiquitous services, alike, and it's fueling an assumption that home and domestic activities are now portable.

Furthermore, the concept of home is becoming more complex and diverse. Airbnb is helping break down traditional boundaries in significant ways so the distinctions between home and away is blurring.

Flexible apartment rental services like WeLive makes this explicit with their tagline: "Move in for months or stay a few nights, WeLive is your home as long as you need."

More young adults in the U.K. and U.S. are living with their parents than at

any time since 1940. And as the number of older people in their 40s and 50s sharing flats has risen, new generations of cohobitees and renters have emerged.

Increasingly, homes are required to be more flexible to accommodate differing needs.



What's missing

Digital technology has created many opportunities in our homes. Yet, the Jetsons-esque dream of the smart home that solves our problems and makes life easier is yet to emerge. Worse, in too many cases, results so far have been underwhelming.

It still takes 11 hours to set up your connected kettle. A connected fridge won't yet talk to an Amazon shopping list. Five connected devices are turned on and off using five different apps. And there are only so many people who count automatic energy meter readings as useful to their daily life.

An over-emphasis on the introduction of connectivity into household objects has resulted in the connected home becoming increasingly commoditized. Furthermore, there is a lack of focus on how connectivity can address the changing nature of home and the different needs of different household members.

Focus must shift onto how best to smooth out single connected experiences into helpful - and, increasingly, integrated - ones. Organizations must go beyond device-centric strategies if they are to

realize new opportunities from harmonizing services to improve the experience of multiperson, shared-household living.



What's coming

In 2017, the smart home will mature significantly, as key service providers including telcos, cable operators, home security companies, retailers and device OEMs use Amazon Echo, Google Home and Apple Home as a license to experiment and bring to market new hardware and services.

Over the past ten years, focus has been on the mobile phone as the single device to control connected services. Over the next ten, focus will shift onto how to optimize the home environment through integration of multiple connected devices.

Connected homes will grow rapidly - by 30 percent a year in the U.S. alone, where 22 percent of households now have at least one

connected device. Within a decade, every electrical device in the home will be linked to the internet, Tony Fadell, Nest Inc.'s ex-CEO, believes. And this means more individuals will be connected to their environment and will be better informed about it.

But connectivity is only the beginning.

Home should become a magical place - no longer just somewhere to live and sleep and eat. Connectivity will not be the main event. Instead, it will enable a householder to create and modify the particular in-home environment he wants, controlling it whenever he wants, even when he is away.

Home will become a helpful home that works. And it will

do this with services built around and for humans, rather than technology and objects.

The helpful home will be entirely focused on you and obsessed with the smooth running of challenges associated with managing it. Its aim will be to make life as easy, safe and enjoyable as possible, not simply to enable Wi-Fi.

Expect, too, the emergence of a new generation of 'iceberg' home services like Thington, which combines different smart home devices into a single interface that appears to do little above the surface but actually works tirelessly beneath the surface on your behalf.

Already, connected fridges are making way for smart shopping services that remind you what to buy without being asked or go even further to restock your fridge when an item runs out. In the U.K., Tesco is exploring this through its own channel on If This Then That, a web-based service, by offering shoppers a variety of ways to trigger purchases, such as automatically ordering an item if you're running low.

Connected meters are making way for seamless energy management. Personal energy assistant Flipper pays bills at the lowest possible price by 'flipping' users to the cheapest provider automatically. And in response to homeowners' switch to energy generation, online peer-to-peer energy marketplaces like Piclo, an

'eBay for energy' launched by Open Utility and renewable energy supplier Good Energy, are emerging.

Expect Tesla's next wave of energy products - part of CEO Elon Musk's strategy for a seamlessly integrated energy consumption and generation future - to cause a stir.

Connected plumbing or lighting will make way for home infrastructure services. Boilers can already order their own repair visits, as with British Gas's Boiler iQ in the U.K. But how about insurance and maintenance of household equipment, such as your boiler managed in the background or automatically?

At the other end of the scale, expect simple solutions that follow the lead of

Switchmate, a smart lighting device that magnetically snaps onto any standard toggle or rocker light switch to quickly make it smart and controllable via an app.

Expect, too, the influence of digital-butler assistants like Google Home to extend and blur the traditional confines of the physical home by integrating in and out of home experiences. In fact, Amazon is already doing this with the rollout of Amazon Echo assistant Alexa onto Amazon Fire tablets.



Valuable experiences matter most

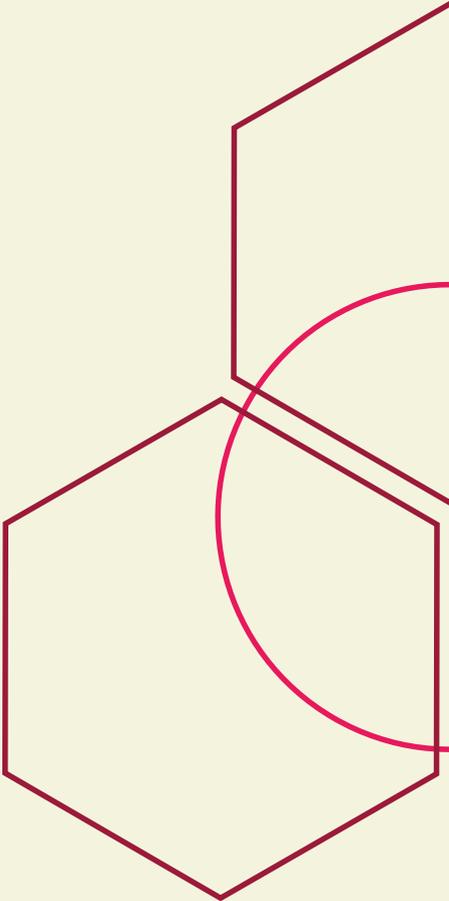
How to respond_

Homeowners want technology to make life safer, easier, more enjoyable and more personal - not just more connected. Organizations' priority must be to smooth out connected episodes into helpful experiences. Just like with autonomous vehicles, idle homes should

be possible to utilize much more effectively than they are today. When you're on a long vacation or work trip, why doesn't your helpful home make you money through Airbnb and organize everything from the rental to cleaning to fridge stocking for you?

The implications of the helpful home are wide. It could be a big opportunity (or threat) for the hospitality industry, commerce giants, platform companies, ride-sharing and AV industries, energy companies, consumer electronics firms and insurance.

Fjord suggests_



SHIFT AWAY FROM GIMMICKRY TOWARD REAL AREAS OF VALUE

Too little attention was paid to turning connected experiences into helpful ones in 2016's device-centric marketplace. Homes will get smarter because digital services companies will start providing more connected experiences in and out of home.

Digital services companies must understand what homeowners want from connected technology. They must focus on the valuable experiences that connectivity can now enable. And they must rethink their approach to both the technology and business ecosystems within the home by capitalizing on the growth of open APIs, which in turn means services can exchange data, talk to and trigger each other without direct user input.

Organizations will need to shift away from gimmickry toward real areas of value if innovators are to maintain a differentiated position in the market and attract the average homeowner (not just the technology-seduced) to buy into their propositions.



Canary

RE-THINK SMART TO BE HELPFUL

Smart means more than just automated or connected; it means clever, thoughtful and considered. Act on this accordingly by considering first the impact on people, their relationships, preferences and environment to determine the best action and most effective channel.

DESIGN FOR USER, NOT DEVICE

Too much emphasis has been placed on connecting objects, and too little on creating home experiences that add real value by capitalizing on connectivity. Home automation sounds like fun, but in reality, people don't care enough. We must design services for the user, not the device. Get hyperpersonal to harmonize shared living, as personalization will increasingly take place at both a household and individual level.



Thington

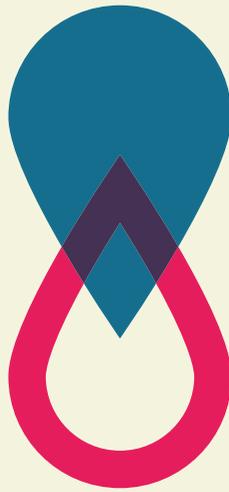
Technology is extending home beyond its traditional physical confines – stretching the benefits of safety, comfort and preferences beyond the household. All-in-one security system Canary is a powerful demonstration of this, as is its belief that in the not-so-distant future, users will use audio to monitor all of the environments most important to them. Organizations should follow this approach and seek to extend the benefits they can deliver, as people transition between different environments and emotional states.

EXTEND HOME BEYOND THE PHYSICAL SPACE



Canary

Nº6



HOURGLASS
BRANDS



Intro_

DON'T GET STUCK IN THE MIDDLE

Across every sector of business, the brand landscape is polarizing. At one end of the spectrum sit huge, platform brands that believe they can either provide service ecosystems or do anything in any market (or both), while at the other are specialist brands with unique focus and clear purpose. Both ends are creating fundamental challenges for those that sit in between.

In 2017, brand owners occupying this middle space – or squeezed middle brands – will ask themselves where they sit and where they want to sit on this sliding scale to create saliency. For some, the answer will be to expand their brand permission space, acting as a platform for startups, for example. Others will place greater focus on craft and purpose. All will refocus to optimize their strategies accordingly.

What happened_

WHICH SIDE OF THE BRAND HOURGLASS ARE YOU ON?

Since the mid-1990s, technology has transformed the brand landscape into the shape of an hourglass.

On one end, you have a new breed of brands extending beyond their original marketplace by mastering the laws of universal needs and user experiences. At the other end of the hourglass, technology has enabled single-minded brands of all sizes with a unique focus to prosper.

Consider the success of Google, Amazon, Facebook, Uber, WeChat and more, which has come about not so much because of outstanding identities and unique character, but because of their commitment to embracing universal values of the digital mindset, such as efficiency, usability, accessibility and simplicity.

These companies' focus is not on form but outperform. Their neutrality – invisibility, even – helped them to be universally embraced. And their less-specific nature allowed for brand extensions that more traditional companies with stronger identities would have struggled to achieve.

So Amazon moved into delivering entertainment on demand, the latest addition to full on-demand music streaming, and Google physically entered into our homes with its smart, voice-activated speaker Google Home.

By 2016, big brands had started to split into a collection of tools that work together, providing distinctive services ecosystems. Some of these brands were orchestrators, some were part of someone else's

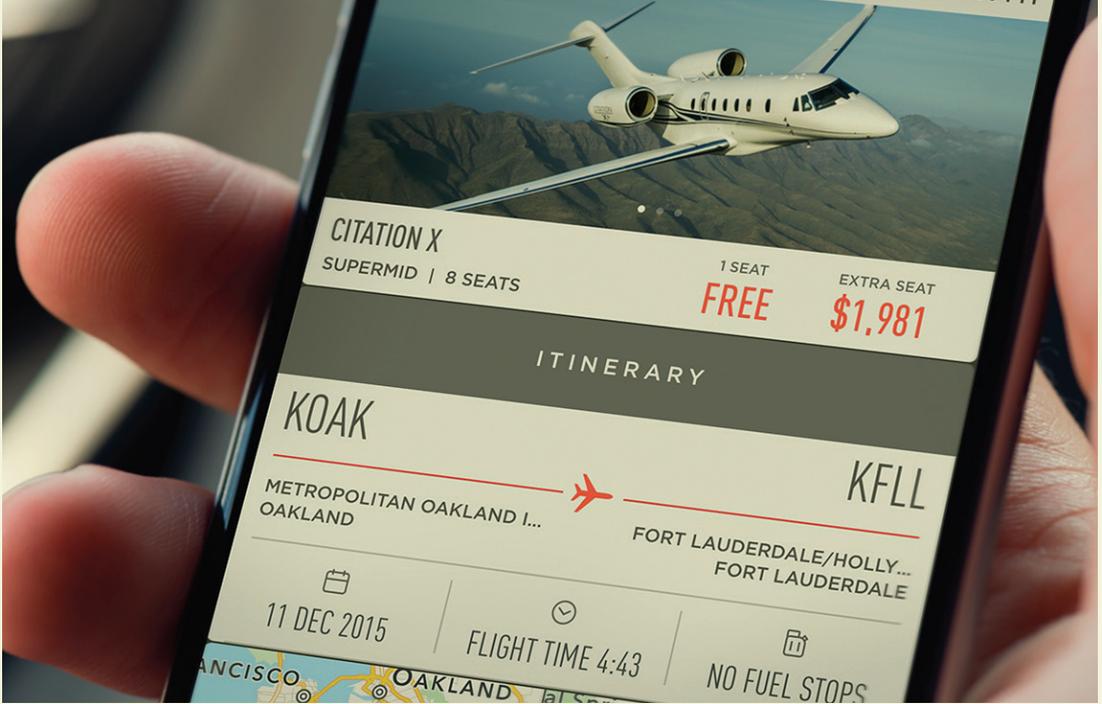
orchestration, and others played both. But all were working to benefit their consumers, wherever they were.

Furthermore, brands began integrating seamlessly with other service providers. Samsung-owned open platform SmartThings, for example, offers consumers the freedom of choice in the connective devices and services through a thriving ecosystem of partners that include Amazon Alexa and Google Home.

As a result, the goal posts have shifted.

No longer is it about a brand for brand's sake. New possibilities now matter most.

Look at Uber's recently redefined business mission: "to give you your time back."



JetSmarter

Or Snapchat's claim to be mainly 'a camera company'.

Then consider the unique focus of brands at the opposite end of the hourglass.

Some are small-scale startups with a focus on craft – the ever-increasing array of successful microbreweries and craft gins, for example, which have benefitted from lower costs for market entry (via ease of sourcing physical materials, supply chain access and the ability to get to market through social media). Some, like private jet mobile marketplace JetSmarter and female sexuality website OMGYes, are deploying technology to disrupt.

Others, though larger, are prospering in challenging times by having a clear sense of purpose. Patagonia,

for example – with its environmental philanthropy and anti-materialistic stance – is enjoying double-digit growth. And despite food deflation, Whole Foods recently announced industry-leading sales per gross square foot.

Unilever CEO Paul Polman is even on record as declaring that all Unilever brands must have a purpose from now on,

and that those without will be dropped.

Brands with unique focus are people-centered, creatively excellent and unafraid to disrupt. They are innovative and agile, too, so they can adapt quickly to new possibilities. But for the majority of other brands still stuck in the middle, this is just not the case.



Soulcycle

What's missing_

GRAB THE CHANCE TO DESIGN FOR A BETTER FUTURE

In almost every sector, mid-market players unable to command the premium prices of specialists and/or without sufficient scale are struggling to find a way forward and stand out.

This dynamic is most visibly played out in retailing where major brands have been recently struggling to hold their ground. But the squeezed middle is now a feature of many other markets because of the rapid evolution of digital technology.

Old, established players whose identities are defined by their traditions are under threat like never before. Worse, the struggle for the squeezed middle is set to get even tougher in the wake of a year of unprecedented public mistrust and social and political upheaval.

In an ever-changing world in which concerns about sustainability, trust and authenticity are growing fast, these developments are now undermining the trust and openness on which effective and authentic relationships depend. And without scale and

flexibility or a sense of purpose, brands in the middle are at risk.

One reason for this vulnerability is a lack of understanding of their position – existing or desired – in the rapidly evolving ecosystems in which they operate. Another is lack of purpose. Retailers, meanwhile, face an additional issue: investors' expectations. Beyond the challenges of brand permission and agility, retailers find they just can't invest like Amazon, or Facebook or Google because their investors treat them as – well, retailers.

However, today's uncertain times present organizations with an opportunity to engage through practical steps to design for a better future.

Over the last 30 years, 80 academic studies have attempted to document the relationship between social enterprise activities and corporate financial performance. The majority of results (53 percent) point to a positive relationship, with only five percent of studies

indicating a negative impact on the bottom line, according to Umair Haque in *Betterness: Economics for Humans*.

But all too often, organizations squeezed in the middle fail to identify and align themselves with the kind of meaningful purpose capable of fulfilling that. Also missing is the design language adequate to articulate and flex with the constantly evolving nature of today's relationships between brand owners and their audiences. Many players – old and new – have entered the marketplace with great products but weak brands in recent years. Brands forced to redesign their inflexible and/or overly complicated brand identities in 2016 included Instagram, Uber and Deliveroo.



What's coming_

By 2021, 20 percent of all activities an individual engages in will involve at least one of the top seven digital giants, as the physical, financial and health care worlds become more digital, Gartner recently predicted.

In 2017 and beyond, large platform brands will keep expanding their permission space. They will take greater

ownership of entire experiences across more touch points.

And they will open themselves increasingly to integration and collaboration, diluting the traditional lines between consumers, vendors and producers.

Unique-focus brands, meanwhile, will increase in number due to the addition of

more single-focused brands with a clear and distinctive purpose, as well as more microbrands powered by cheaper access to technology and lowering barriers to entry.

Squeezed, middle-of-the-market brands that fail to build their positions by finding new and powerful ways to stand out will go out of business, fast.



OMGYES

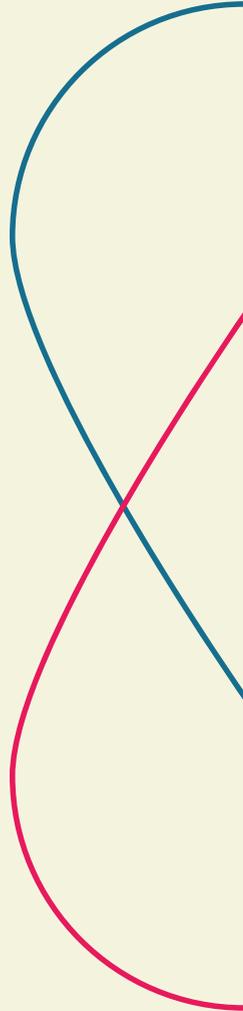
How to respond_

Brands squeezed in the middle must learn from those at both ends of the brand hourglass.

While many Silicon Valley disruptors talk of digital products, they are in fact services. Uber, for example, is a service ecosystem of which the app is just one touch point.

All brands should acknowledge that anything they create is part of natural, social and economic ecosystems. They must shift their thinking away from an industrial, assembly line and silo-based mindset to a new economy approach based on betterness and circularity.

Fjord suggests_



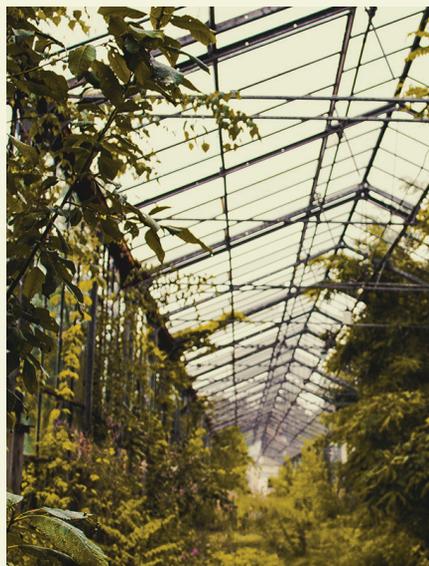
ARE YOU A LIVING BRAND?

Brands now find themselves in an environment in which they must change in real time to flex and adapt to meet customers' wants and needs across a bewildering array of channels, some of which they have only limited control over.

At Fjord, we have identified key qualities of those brands most likely to prosper – we call these brands Living Brands – and how those qualities can be developed. How a brand behaves is now its critical differentiator as, increasingly, brands are defined by the relationship they have with their users.

Brands must consider whether they are a platform in their own right or part of an ecosystem surrounding someone else's platform. Implementation of the Revised Payment Service Directive (PSD2) in Europe in 2018, which will mean the opening of APIs for financial services, will make this especially mission-critical for banks.

All brands can learn to shed what Koolhaas termed “the straitjacket of identity.” Then they must make their purpose and position tangible in a meaningful and adaptable way.



Soulcycle

DECIDE WHAT KIND OF LIVING BRAND YOU WILL BE

Define your brand's behavior in multiple environments. And understand what sort of brand you can be. Are you a utility brand – something to use, with related interactions with users on a given occasion? Or are you an audience brand – something to say, involving occasional interactions? What about an experience brand – something to do, involving continuous interaction as you become part of a user's daily life? Or a relationship brand – something to be related to, which can transform a user's daily life?

TO ESCAPE THE SQUEEZED MIDDLE, FIND (OR RE-FIND) YOUR PURPOSE

If an organization cannot imagine a purpose to exist beyond economic growth, there is a danger it has no useful purpose or values that will resonate with people. How is your organization leaving the world a better place through its activities? For example, consider developing a circular-economy strategy to recapture and take responsibility for any products your business puts into the world. Convey your purpose effectively using the right language. Define an identity that makes that purpose tangible. Design language must be unique and flexible enough to grow over time, avoiding the temptation to replicate the common language that the startup world has imposed. Embrace design culture and free interpretation. If purpose is shared and its essence is clear, coherence is guaranteed.



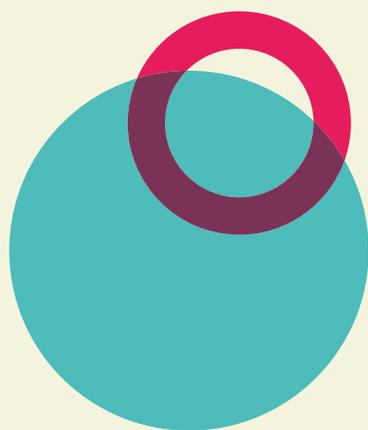
Thinx

THINK BEYOND SERVICE

As customers get more sophisticated, mere service from the organizations they choose to deal with is no longer enough. Brands will grow if they work harder to demonstrate the clear difference they can make – as has been done successfully by underwear brand Thinx, fitness workout brand Sweat with Kayla, or indoor cycle fitness brand SoulCycle. Focus on more than experience to create meaningful relationships and a sense of belonging that many of the big, generic brands lack.

*Brands squeezed
in the middle must
learn from brands
at both ends of
the hourglass.*

№7



ME, MYSELF
AND AI



Intro_

HUMANIZING CHATBOTS

Artificial intelligence (AI) grabbed widespread attention in 2016. But while it has evolved exponentially – AI-enabled chatbots within messaging apps were kicked into the mainstream last year – the technology risks being overhyped. True, AI has matured; yet it is still far from a human experience, as most chatbots are currently almost indistinguishable.

In 2017, AI's development will accelerate as it becomes an established part of organizations' design thinking, and as such, its development will accelerate.

This will drive a growing need for machine-learning capabilities to become more emotionally intelligent, paving way for the next generation of digital services. Organizations' approach to developing products and services will shift, as emotional intelligence becomes a critical AI differentiator.

"Anyone who makes anything now is interested in a conversational interface. Whether it's a device like a TV or a fridge or an app, they are thinking 'what is the next thing for my product?'"

Kyvan Mohajer, CEO, SoundHound, maker of Hound

What happened_

CONVERSATIONS ARE THE NEW INTERFACE

AI – a machine’s ability to learn and make its own decisions – has been with us for more than 60 years. But it took voice-controlled digital assistants and AI chatbots to bring it to the attention of many.

Back in 2015, in an effort to compete with Google Now and Siri, Microsoft launched virtual assistant Cortana with the hope that it would eventually interact with users in an anticipatory manner.

Within a year, it positioned Cortana across all of its services in a bid to democratize AI, as newer rivals pushed ever-improving functionality. Through partnerships with Yelp and Uber, for example, Hound enabled users to perform more complex and integrated multitasking from within its app.

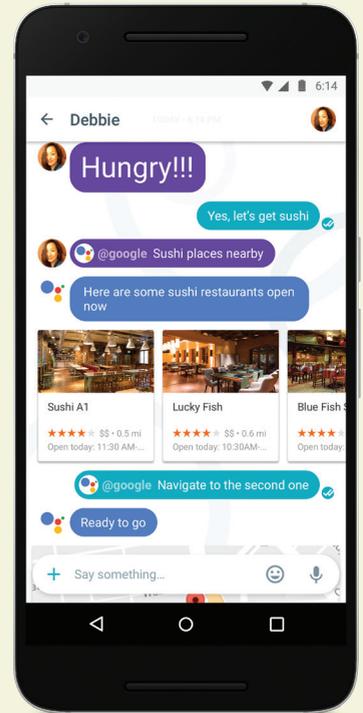
What really changed the perceptions of AI, however, was the growing prevalence

of chatbots. Designed to look as if they sit inside messaging apps, chatbots enable users to have a back-and-forth conversation with a machine that feels almost human.

In 2015, the use of messaging apps overtook social media use, a key turning point. Then, in early 2016, Facebook announced businesses could deliver automated customer support, e-commerce guidance, content and interactive experiences with users talking to Messenger chatbots, just like they talk to friends.

Within six months, 33,000 developers had written 34,000 Messenger bots, with the best uses involving driving people toward subscriptions, facilitating small transactions and customer service.

Today, talking to an AI is expected by many to soon become the way we interact with our computers.



Google

Microsoft calls chatbots “the new apps,” and Facebook extolls the power of the threads of conversation in apps such as Facebook Messenger and WhatsApp. The success of Amazon Echo, meanwhile, points to new horizons for AI and voice-driven chatbots.

AI chatbots have already enabled companies to scale highly personal services never possible before.

Online retailer StitchFix used AI to massively scale the reach of personal service, via personal stylists. With the help of 60 data scientists, it deployed AI bots to help 2,800 part-time stylists make informed decisions based on 100 to 150 personal data points for each consumer - from sleeve length to bra size.

Jostling for position in the workplace, meanwhile, are AI chatbots designed to enhance enterprise social network apps that enable

teams to collaborate in open forums or talk casually and catch up in private messages. Howdy, for example, is a chatbot developed for team communication app Slack that collects answers on your behalf, while X.ai is a bot that intelligently schedules meetings via email.

AI has even entered health care. U.K. startup Babylon Health’s AI triage tool uses algorithms drawing on a clinical database to answer patients’ questions before they talk to a doctor.



Facebook Messenger

*Humans are not
obsolete just yet*

What's missing_

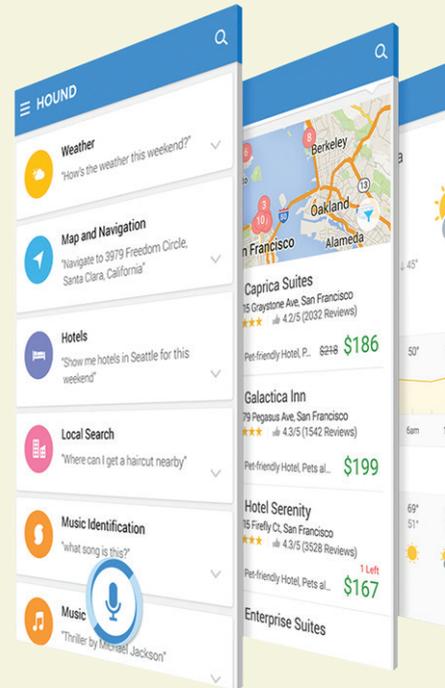
AI is far from the human experience of our dreams. It has no apparent human feeling, understanding or ability to conceptualize. And this has limited the degree of emotional intelligence possible to build into a digital service.

AI-powered virtual assistants lack empathy – as has been poignantly demonstrated by users asking for help following an emotionally harrowing event, such as sexual assault, or when contemplating suicide.

The need for EQ in chatbots is obvious from such

highly sensitive, human circumstances. But, just as important, expectations of a more human experience will naturally grow as more of us allow chatbots into our personal space. In conversation, we change our behavior in response to how whoever we are talking to is feeling or what we think they are thinking.

People are imperfect and AI-enabled services need to be cleverly crafted to both receive emotional input and respond in an emotionally intelligent way.



SoundHound

What's coming_



Mitsuku

AI will make a further leap forward in 2017, driving services with contextually aware experiences and the ability to understand and respond like a human.

IBM's Watson Bluemix platform offers a text tone analyzer and personality analysis through its natural language processor. The emotional well-being app Empath and real-time emotional intelligence solution Cogito's technologies both offer voice analysis that can detect and interpret our emotional state, not only by voice inflection but also by the pattern and rhythm in which we say things. Microsoft, meanwhile, has developed a

technology that can read and interpret the emotional state of our facial expressions.

Collectively, these new technologies represent the next wave of AI and provide the means for organizations to build services that can actually act in intelligent ways.

Services using these AI capabilities will know if the person on the other end of the conversation is not paying attention, or is angry, worried or sad. And they will also know how to react appropriately, in real time. But don't worry, humans are not obsolete just yet. Tomorrow's more emotionally intelligent digital services will require humans

to fulfil their true emotional potential – for a while, at least.

Data-crunching AI machine learning software like Kensho is rapidly replacing the role of the financial analyst on Wall Street. However, human interaction-based services, like conversational AIs, will require a cooperation between humans and AI, both from behind and in front of the technology. This AI-human symbiosis will be essential to create chatbots with empathy and emotion.

Today's chatbots only understand how to sort through data and learn how

to make better decisions interpreting and responding to an intended task.

Consider your AI chatbot as a character in a play. This character needs a defined personality and a written script. But more importantly, for a non-empathetic actor like an AI chatbot, a great director and well-written screenplay are essential. Follow the lead set by Google when it hired comedy writers to spice up the language and add a bit of personality to Google Home. Tomorrow's digital services will be able to interact with empathy on an emotional level. With the help of humans,

they will be able to perceive, interpret and respond with a level of emotional intelligence that has never previously been possible. While machine-learning capabilities will become more emotionally intelligent, the usefulness of machine capabilities lies in the fact they are not human – they see things differently and make connections we do not and cannot make.

Conversations are driving this next wave of digital. And by 2020, the average person will have more conversations with chatbots than with his or her spouse – without even realizing it.

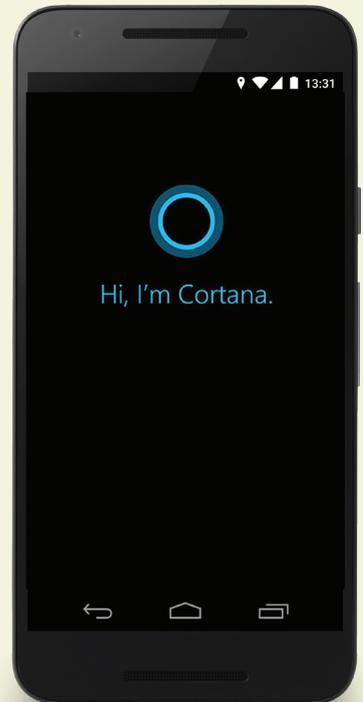
How to respond_

With the openness and ease of use that platforms have cultivated, an extraordinarily fertile environment now exists, which means that anyone can go online and start building a self-learning chatbot.

Organizations that want to develop the next wave of emotionally and contextually aware AI chatbots must define themselves – quite literally – as a person. They must embed that person's values into a variety of suitable personalities appropriate for their particular context, because there is not one universal personality that suits every situation or every person.

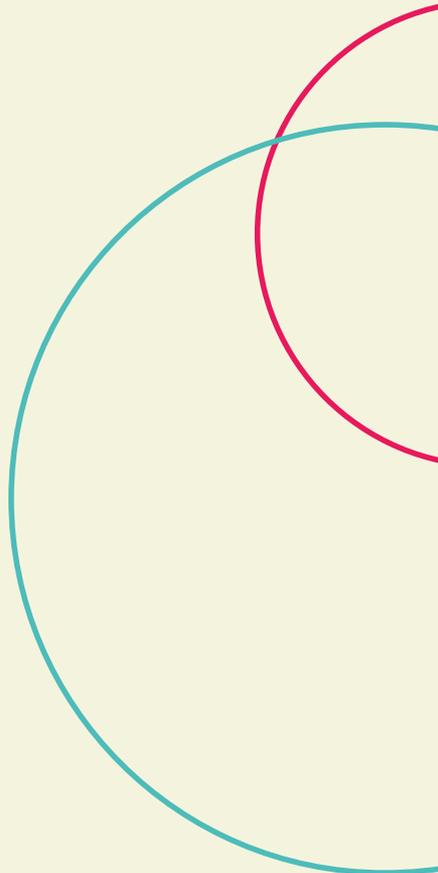
In order to create the most relevant and compelling services, they will need to read and predict the values and personality of the audiences they are engaging with and persuade customers to share personal information. And they must develop the capability to understand human language and incorporate that into these services.

Keep the conversation in context and create magic by ensuring the chatbots users interact with have the appropriate personality. Only in this way will brand owners achieve the brand differentiation so lacking in so many AI applications – AI-enabled chatbots, especially – today.



Mircosoft Cortana

Fjord suggests_





PERSONALITIES ARE THE NEW UX

Brand owners must understand that if conversations are the interface, then personalities are the new UX, and they must address their creation and development accordingly.

BE TRANSPARENT

People need to know who or what they are interacting with. The risk with AI is that people end up feeling duped, especially if the technology reaches a level almost indistinguishable from actual human experience. The Mitsuku chatbot - winner of the Loebner Prize in 2016 for most human-like AI - can manage a conversation for up to 25 minutes and achieved a 90 percent human score. Be transparent, and users will feel the delight and marvel at the quality of your service.

DEFINE VALUES SPECIFIC TO YOUR BRAND

As services become more emotionally intelligent, the organizations behind them will face difficult ethical issues, forcing them to decide how best to act. For example, should a provider of autonomous vehicles prioritize protecting an AV's passengers or the people it may hit? Mercedes has already defined its value: passengers first, bystanders second. Organizations must be clear about where they stand on the issues relative to their business. Define personal values for your AI that will arm your AI to make decisions your brand can stand behind.

PROTECT THE USER

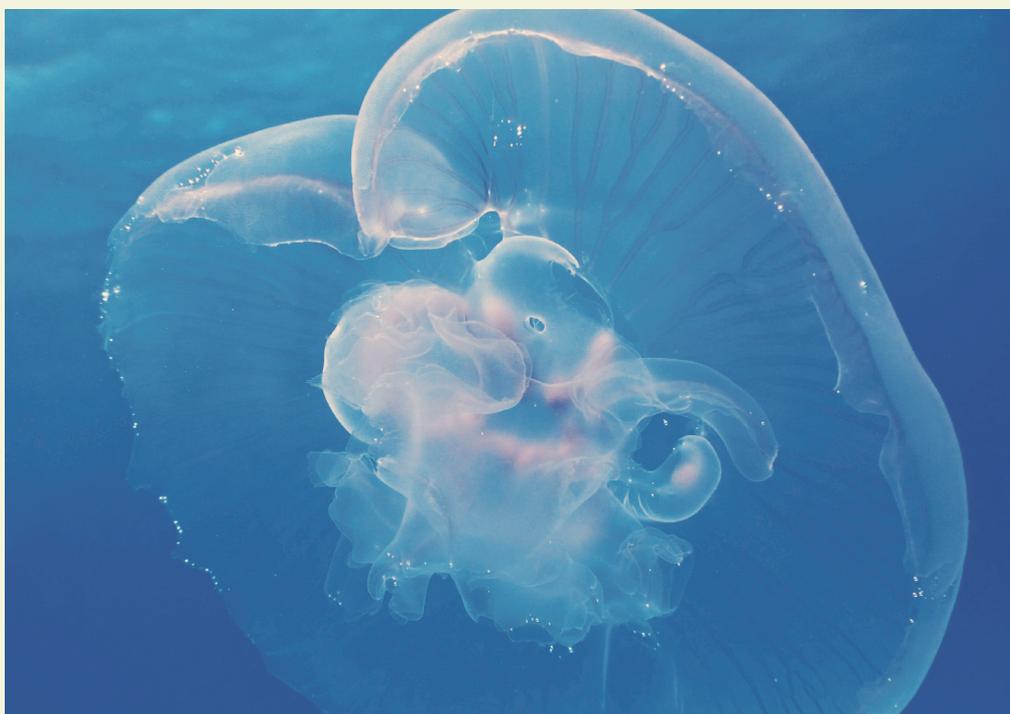
Users must be involved in the evolution of an AI service if it is to deliver a more human experience. To develop and enhance AI, businesses will have access to highly personal user information. Trust is key. Adopt an opt-in policy where users can easily choose the personal information they share and keep what they share safe. Best of all, make it clear that the chatbot is their assistant, not the corporation's. Ensuring users feel the software is on their side will be vital for acceptance.

GO BEYOND TEXT

If you are serious about bringing EQ to AI or a chatbot, consider carefully how to communicate this in a medium that is notorious for misinterpretations. Alternatives to text include emoticons and chatbots that send pictures. Whatever the language, however, tone of voice will be key.

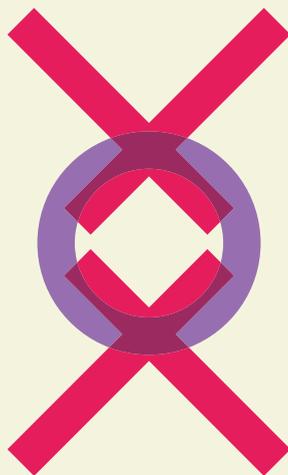
Just how the chatbot market will evolve from here remains to be seen. One possibility is that it follows the pattern of the apps market a few years ago when, after initial rapid growth, users stopped using them.

This may not happen within the next year but remember, EQ will help you learn faster and build loyalty more quickly before the chatbot market consolidates.





№8

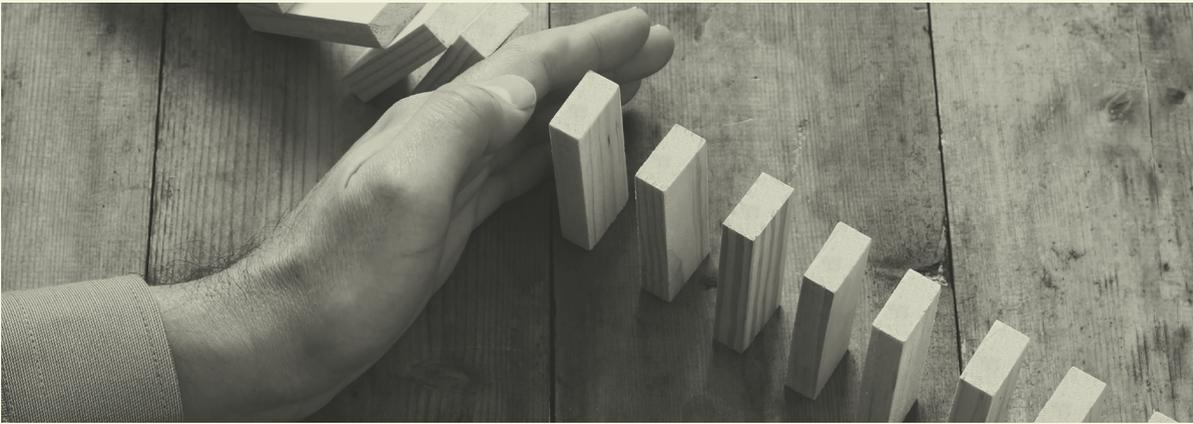


UNINTENDED
CONSEQUENCES



Intro_

CUSTOMER-CENTRIC CANNIBALS



Organizations across every sector are becoming more consumer-centric by harnessing digital technologies. But recent debates about Airbnb's alleged impact on local rental markets, the impact of fake news stories on the U.S. presidential election and social media's role in Kim Kardashian's \$5 million jewelry robbery highlighted the risks associated with the unintended consequences of consumer-centricity.

Hyperconsumer-centricity and technology feed off each other as businesses seek to give customers what they want using digital.

Both are admirable in their intent. But the same can't always be said when it comes to their side effects.

In 2017, consumers and media will challenge the actions of the organizations that impact their lives even more, not less, forcing digital ethics up corporate and legislative agendas. Organizations will focus more closely not just on their customer experience and employee experience but also their social experience to guard against the unintended consequences of their activities.

What happened_

THE GROWING IMPORTANCE OF SOCIAL EXPERIENCE

The unintended consequence of a wide array of technology-enabled business strategies have made headlines.

In the U.S., officials and civic leaders from a dozen U.S. cities called for the Federal Trade Commission to investigate the short-term property industry. This was in the light of Airbnb's alleged negative impact on affordable housing, even though Airbnb's own research conducted in a number of cities suggests it is having little impact on the rental market.

In the U.K., Uber's right to classify its drivers as self-employed was overruled by a landmark employment tribunal that also found the company should pay drivers a national living wage and holiday pay - a ruling with profound implications for

the gig economy in which temporary positions and short-term engagements are common.

The unintended consequence of artificial intelligence (AI), augmented reality (AR) and social media also made headlines.

When Microsoft released its millennial chatbot Tay, it quickly began promoting extreme views on Twitter. Meanwhile, organizers of the first international beauty contest judged by AI, sparked controversy when the AI's algorithm favored entrants with light skin.

After social media platforms eliminated human editors who curated trending news stories, the algorithms that replaced them promoted untrue and vulgar stories on newsfeeds, fueling concern about the

burgeoning industry for peddling fake news stories online.

When Kim Kardashian lost \$5 million-worth of jewelry when she was robbed in Paris, many speculated the thieves had seen her showing off her jewelry on social media. In China, meanwhile, some teachers and parents used WeChat to extend China's school day into the night, perpetuating round-the-clock school pressure.

Even Pokémon GO was not without unintended consequences when armed robbers used it to lure players into a trap in Missouri.

Cyber security continues to be top of mind as data breaches are never far from the headlines. Privacy and security concerns are now so great that they have stopped

Acknowledge and act on your social responsibility

one-half of American internet users from doing basic things like posting to social networks or buying online.

The diminishing of our skills as we become increasingly reliant on technology is another unintended consequence – a paradox of automation that applies to an ever-widening variety of contexts, from airplane pilots to cruise ship crews to operators of nuclear power plants.

These examples demonstrate how the unintended consequences of extreme consumer-centricity is fast-becoming a pressing challenge for all organizations, whatever their area of interest or activities. Everything that is created requires something else to be changed, destroyed or depleted. And the ramifications are everywhere to see.



What's missing_



We believe organizations are not thinking hard enough about the implications of the business decisions they make and their impact on not just the consumer or employee experience but on society as a whole. In other words, the social experience.

Digital services can be a power for good, helping

people overcome conditions such as agoraphobia, for example, by using therapy that brings sufferers into contact with virtual humans. Equally, they can offer a back door to crime and misdemeanor. We challenge organizations to acknowledge and act on their social responsibility.

What's coming_

In 2017 there will be a sharp rise in interest in digital ethics and an upscaling of the debate on conscious capitalism. Expect more initiatives like the Leverhulme Centre for the Future of Intelligence, a research center launched by Cambridge University to explore the opportunities and challenges posed to humanity by the development of AI.

Meanwhile, new structures to help manage unintended consequences will be put in place.

In October 2016, the U.S. government, which has funded AI for 50 years, published its plan for AI's future with key guideline principles including: AI should augment humanity, not replace it; AI should be ethical; and everyone should have equal opportunity to develop AI systems. In the U.K., following a Science and Technology Committee report on

robotics and AI – which called for a commission to be established to address these technologies' likely ethical, legal and social impact – the British government is now under pressure to act. In 2017, the U.S. Treasury Department's Office of the Comptroller of the Currency will launch an office dedicated to responsible innovation, and implement a formal framework to improve its ability to identify, understand and respond to financial innovation affecting the U.S. federal banking system. This is a model many other government departments around the world will surely follow.

We believe every organization must ask themselves the tough questions: how much convenience they want, at what point invasion of privacy becomes too great a price to pay, what happens when data is captured by a smart city and, more to the point, how to opt out

(or, indeed, who governs consumer-centricity). Already, people have been calling for discussion of merits of the circular economy, which – with its emphasis on circular product and process design that promotes product reuse, recycling and cascading – offers a possible solution to the planet's emerging resource problems. This groundswell will increase with growing pressure on governments to address the societal impact of new technologies with fresh governance to encourage greater organizational responsibility for their actions.

The unfolding plans of some of our most consumer-centric businesses will provide the catalyst for change.

Consider Uber. Justifiably determined to ensure the imminent arrival of the autonomous vehicle does not undermine its business,

it is investing heavily in AV technology.

Improved profitability and efficiency will come from jettisoning human drivers altogether. But this will have numerous other unintended consequences. Pressure will grow from individuals, too, with a rise in activism.

Growing numbers of people are questioning the algorithms that increasingly influence their lives. Many have tried to crack the code behind Facebook's feed. Others are concerned that the use of algorithms to feed news according to individual preferences are reducing public debate. More of us will question the nature of automation itself

and demand organizations to respond. Backlash will grow, too, against employment conditions that are an unintended consequence of technological advances in areas beyond fashion, consumer food and medical products. On the front line, the prioritization of lowering costs and increasing customer-centricity will replace low-grade jobs. New employment frameworks are already emerging to address this, but more will follow.

Meta services will increase to help workers involved in digital piece work, which is notoriously low-paid, to manage the stress and strain of managing several parallel forms of digital employment. Opportunities will grow to

develop ways to bridge the gap that exists in transferring employees' ratings and skills on one platform, such as Uber, to another like TaskRabbit.

We will need to address the needs and best interests of those millions of citizens who don't have access to the growing array of local, transparent, traceable digital services now being enjoyed by the well-heeled urban elite. When everything is digitized and basic public services are moved online, what happens to the digital disenfranchised, and how can they find meaningful - and dignified - employment in a digital age?

We need to address the needs of citizens, who don't have access to digital services

How to respond_

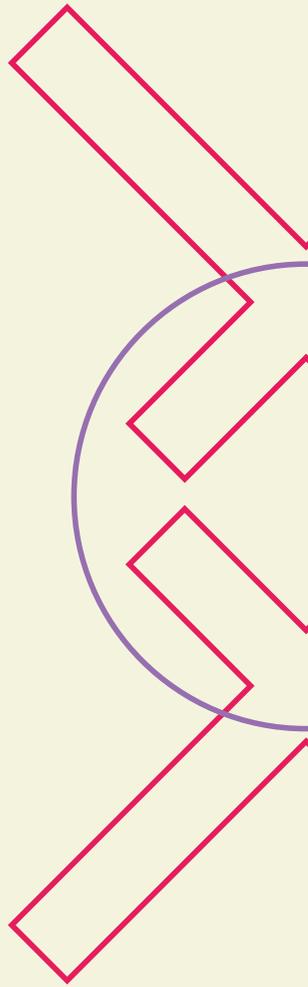
The unintended consequences of digitally powered consumer-centricity are becoming some of the thorniest issues of our age. But organizations cannot shy away from the challenge of finding ways to pre-empt and address them.

It's hard to develop a set of fixed ethical rules that

prevent all possible misuse, and regulators cannot keep pace with the speed of technological advancement, Gartner's Frank Buytendijk pointed out. And while pre-testing is vital, "it's also important to build in features that enable constant monitoring or smart machines for unintended consequence."



Fjord suggests_



QUESTION WHAT IMPACT YOUR ACTIONS WILL HAVE ON SOCIETY

To guard against the unintended consequences of their actions, organizations must address the bigger picture:

THINK SOCIAL EXPERIENCE

Organizations readily consider the customer experience and employee experience. Now they must address social experience, too – the wider, social impact of what they are doing. They must question what impact their actions will have on society or the environment, where there will be hidden costs, and where they are most likely to be exposed.

MAKE PEOPLE THE HEART OF EVERYTHING YOU DO

Ask what can and should people continue to do that cannot be automated? Organizations must find ways to preserve and promote the dignity of work and ensure the value of human beings sits at the heart of their digital services. Embracing social experience, as well as consumer and employee experience, means accepting your moral obligation to reach and include the excluded.





PRIORITIZE DIVERSITY

Consider more closely the diversity of the people you are designing for and the people who design for you. A digital service is only ever the product of its designers and coders, and as such, ensuring the diversity of teams creating these new products and services will be key. You will need to design automation. The more perspectives introduced into that design and development process, the better and more inclusive that automation will be – and the more unintended consequences you can avoid.

Digital ethics. A new priority

LEARNING AND EVOLUTION

Once, people learned skills in school, on apprenticeships and at university. Now, that's no longer enough; continuous learning and development is critical to stay relevant in a world that's constantly changing. The best employers will look for employees hungry to learn, and, vice versa, the best employees will look for routes to continual learning and skills development.



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