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Foreword

The internet changed *everything*. Now *everything* is changing the internet.

If you want to **reach out to new audiences, improve customer service** or **engage the next generation of employees** then you should read on... We've looked at the devices, channels and influencers that are shaping, and reshaping, the digital landscape for corporate and B2B communicators.

For many years, our access to digital content and services was ruled by text-dominated websites viewed on PC monitors. That was until Facebook graduated from the campus in 2006 and the iPhone transformed our view of how we can connect to the web.

These two events have triggered a gradual shift from single screen to multiscreen thinking. From a website to entire digital ecosystems, we now see marketers exploring new ways of connecting with their audiences.

During this time the direction of change has been relatively constant. Mobile screen sizes have slowly grown, the use of social networks has steadily increased and the proliferation of non-text content (photography and video) continues to expand.

So why are we writing about this now?

In short, there is a wide group of technologies in Gartner's 'Hype Cycle'* that are in, or just emerging from the 'Trough of Disillusionment'.** These are beginning to fundamentally impact the digital communications landscape.

In this guide, we've addressed the devices that we'll hold, wear and chat with, the channels these devices use to access digital content and the technological, societal and commercial trends that shape our expectations from digital systems.

You may be an early adopter, looking to jump on *the next big thing*. Alternatively, you might be looking to gain the edge over your competitors, thinking ahead on how to *engage with your audience*. If so, read on.

*Developed by research company Gartner, the 'Hype Cycle', by is a graphical representation of the maturity, adoption and social application of specific technologies over time.

**The 'Trough of Disillusionment' is the portion of the 'Hype Cycle' where interest in a new technology has waned due to the failure or poor performance of early experiments and implementations.

Drivers

The **key drivers** that will shape **the future** of corporate and B2B digital communications.



Devices

The equipment we'll **hold**, **wear and chat with** to connect with the digital world.



As the variety and capability of digitally enabled devices explodes, we look at the technologies that are shaping the way businesses can connect with audiences.

Does this explosion represent an omni-channel nirvana or nightmare? And how exactly can brands digitally enhance reality?





Smartphones

Half of China's population now uses the internet on a mobile device.

China has 731 million internet users – 53% of the population. 95% of Chinese internet users are on mobile.



Wearables

The global wearables market will be worth \$34bn by 2020.

Already worth \$14bn in 2016, fitness products are continuing to dominate nearly 50% of the market.



2020: VR to gross \$38bn worldwide.



Augmented and mixed reality

By 2025 14.4 million US workers will use smart glasses at work.



Connected objects

IDC predicts that the connected objects market will be worth \$1.7 trillion by 2020.



Touch and gesture input methods



PC and laptop







Fragmentation of devices: omni-channel nirvana or nightmare?

The range and capability of devices we use to access digital content is expanding rapidly. Wearables have moved beyond the Apple watch to the likes of health monitors and a Levi's jacket that controls our music.

2017 promises much for VR: the introduction of sophisticated hand controllers at the top end of the market and the arrival of Google Daydream to bring interactivity to the mobile masses.

More and more social networks are supporting VR. Most notably, YouTube now supports VR on iOS as well as Android. The final piece of the puzzle is of course content. 2016 saw The New York Times win awards for VR journalism, Just Eat showcase interactive data visualisation and GSK consumer health win a Cannes Lion award for a migraine simulator.

Smartphones

The smartphone revolutionised our relationship with the internet. Now biometric security and mobile payments make the smartphone our secure portal to the digital world.

Perhaps this should be little surprise when the average user checks their phone 76 times a day. But increased usage of devices is old news, so is mobile still a story? We think so. Despite 46% of the globe accessing the internet through their phone, rising to 60% by 2020,¹ many mobile web experiences continue to be poor.

Audiences will increasingly turn away from sites that are squeezed awkwardly on to a small screen with navigation hidden behind an anonymous burger menu. They'll demand streamlined experiences not just optimised for the device, but geared towards seamless task completion. Does this mean you need to think mobile-first? No, we think you need to think mobile-equal and recognise that your audience are multi-screening, using devices for different tasks. Successful businesses will recognise this and optimise each device experience accordingly.

Moreover, the mobile world is still evolving; by 2020 it's predicted that 75% of all mobile traffic will be video and network speeds will have tripled to 6.5 Mbps.² Devices are also becoming more secure with biometric security such as fingerprint and iris scanning present on all smartphones by 2020.³ More secure devices will contribute to how we manage our finances. Analysts forecast that by 2020⁴ there will be over 2bn mobile banking users.

Digital assistants will continue to be a major driver of voice-initiated search and content discovery. 30% of all searches will be voice initiated by 2020,⁵ so expect to revise your SEO strategy to focus on natural language (long tail), not just keywords.





Half of China's population now use the internet on a mobile device.

China has 731 million internet users – 53% of the population. 95% of Chinese internet users are on mobile.⁶

Google's Pixel phone supports VR experiences via its Daydream platform.



Wearables



The global wearables market will be worth \$34bn by 2020.7

Already worth \$14bn in 2016, fitness products are continuing to hold nearly 50% of the market.



Nadi X Yoga Tights by Wearable X.

Wearables will become washables as they infiltrate further into our everyday lives.

Wearable tech has come a long way since Apple launched its smartwatch in April 2015. The global market is currently worth \$14bn, but CCS Insights estimate this will hit \$34bn by 2020,7 with fitness products continuing to dominate nearly 50% of the market.

Where wristbands have long dominated this space, big players and disruptors alike are now exploring smart clothing.

Google's Project Jacquard (a fabric with a conductive metal core) has teamed up with Levi's to create the Commuter Jacket, which allows wearers to control their phone through swipes of the sleeves.

For the diet conscious, the Samsung WELT belt detects when you're putting on weight, while innovative startup Wearable X have created Nadi X Yoga Tights which vibrate, prompting you to adjust to the correct yoga position.

What does this mean for digital communications? It means **brands need to consider methods of communication beyond display on traditional screens** – everything from optimising emails for viewing on smartwatches to experiential campaigns involving wearables.



When Microsoft's Surface Dial is placed on the screen it brings up a contextual interface, allowing the user to cycle through program options rapidly.

From typing to swiping, pointing to spinning, input methods have moved on. Innovation in input methods is long overdue – the QWERTY keyboard has been around since 1868, and the mouse since 1964.

Attempts to change these, while practical, have been largely conservative. Apple's Pencil provides touchsensitive input for tablets, much like an actual pencil. Microsoft's Surface Dial, a hockey puck-shaped knob, brings motion flexibility to input plus responsiveness through vibration.

The gaming sector continues to demonstrate rapid innovation. The Nintendo Wii, followed by the camerabased Microsoft Kinect motion tracker kick started gesture based control. But the industry hasn't stopped there. Now Leap Motion is commercially available and allows gesture control of a PC through a small USB hand motion sensor.

Elsewhere, Google's Project Soli allows precise hand gesture control using radar technology, while Mind RDR links Google Glass with telekinetic technology (yes TELEKINETIC!) to take and upload photos with mind control.

Lastly, crowd-funded Cicret aims to replace your screen altogether, projecting onto the user's arm from a bracelet and allowing for interaction with the image.

Marketers need to carefully consider the way a user will engage with their communications in the future. Evolution from the classic point and click of a mouse is upon us.



Connected objects

All your home appliances interconnected and controlled via your mobile or VPA.

"How much gas have I used this month and how much did it cost?" "Play the new Rolling Stones album" or simply, "House Off" – these are all commands made possible by smart devices aka 'Connected Objects'.

Apple's HomeKit conveniently bundles all your smart devices in to one userfriendly interface. Other competitive solutions offer the same level of organisation (albeit with more setup time), like Amazon's Echo unit or Google Home.

Currently, connected objects are passive, relying on commands to be given. We believe the future lies with 'Enchanted Objects'. The term, coined by inventor David Rose, describes objects that understand their environmental or social context and can trigger actions accordingly. A nice example (a Rose invention) is the Ambient Umbrella whose handle glows when rain is forecast in the vicinity. We see a future where 'Enchanted Objects' freely share information in the cloud. This will create a deeper understanding of the user and their requirements, enabling the objects to carry out appropriate tasks without instruction. Think of scenarios like your heating system detecting when you are 10 minutes from home. This message is then passed on so that your lights turn on as you approach the drive, followed by your door unlocking as you walk up the path.

Data generated by these devices could just as easily inform automated marketing processes. Previous buying patterns of a user can be analysed to predict when they might need a new pair of trainers. This triggers a social advertising campaign, then when that user enters a shopping district an offer could be automatically pushed to their smartwatch for 20% off their preferred brand.



IDC predicts that the connected objects market will be worth \$1.7 trillion by 2020.⁸





New **possibilities** to digitally enhance reality.



The increasing commercialisation of augmented and mixed reality – together with locationbased content exchange (beacons and near field communication) is rapidly merging the physical and digital worlds creating new, immersive, location-orientated experiences.

With the success of Pokémon GO, AR became an overnight mainstream reality. But Nintendo are not the only tech giant playing the AR card. Apple's acquisition of Metaio signals their intent to augment our reality.

But it's mixed reality that will have more impact on the way we work and live – synthetic content reacting to the physical world it overlays. Microsoft are the unlikely leader in MR applications with brands and digital service providers already using HoloLens.

Virtual reality [VR]



Facebook Spaces allows users to interact in a 360 video environment ... provided you own an Oculus Rift.

From 360 films to fully digitised, explorable environments, the future promises much for VR.



2020: VR to gross \$38bn worldwide.⁹

At the top end of the VR market Oculus and HTC dominate with tethered PC systems, both now with hand controllers. Mass adoption is expected to be driven by mobile with Samsung bundling the Oculus-powered Gear with handsets and Google giving away Cardboard (\$15 to buy).

Disruptors are focusing on widening VR's appeal, Orion are looking to replace hand controllers with ... well ... your hands, while MindMaze have developed goggles that capture and translate facial expressions onto your VR avatar. Big players like Facebook have focused on making VR more sociable. Facebook Spaces, a VR chatroom, allows users to interact in a VR environment, explore 3D videos together and even take selfies.

Many brands have already embraced VR. Virgin Holidays now have in-store VR 360 films while Just Eat use VR real-time visualisation for their London deliveries. Virtual reality is now a realword reality but brands should tread carefully before jumping in feet first.



AR is already bridging the gap between the digital and physical worlds – just check your app store.

With the success of Pokémon GO, AR became an overnight mainstream reality.

But Nintendo are not the only tech giant playing the AR card. Apple's acquisition of Metaio signals their intent to augment our reality.

From interactive car manuals to enhanced magazine content, the range of AR applications is growing – just check your preferred app store.

From a business operations perspective, it's estimated that by 2025, 14.4 million US workers will use smart glasses to aid their day-to-day work processes.¹⁰

Mixed reality [MR]

Previously the stuff of science fiction, blended digital and physical experiences are a reality.



Microsoft HoloLens developer kit goes on sale for \$3,000.¹¹ Like AR, mixed reality is the overlay of synthetic content on the real world – but the key characteristic of MR is that the synthetic content can react to the real world in real time.

Following the revelation that Magic Leap (who secured \$1bn in investment) are way behind in their development programme, Microsoft HoloLens is now the unlikely leader in MR applications.

With the developer kit on sale at \$3,000,¹¹ early adopters are already revealing their plans for MR. From a Volvo showroom to 3D architectural designs and product design, MR is set to revolutionise the way we communicate, entertain and work.





Opportunities



Virtual reality

Transport customers to new destinations where they can discover more about your product supply chain or operations.



Augmented reality

Attract higher calibre talent with AR experiences to give candidates a taste of what it is like to work with you.



Wearables

Introduce an element of gamification to your events using wearable tech – think GPS scavenger hunts or a virtual running club to promote healthy living.

Channels

The **conduits** our devices will use to access digital content and services.









The web may not have changed significantly in recent times (okay, it's got faster and easier to connect with), and more and more of us may be connected to social – but there is a new kid on the block and it's changing everything. Again.

Voice may well become the next channel alongside web, social and apps. Whether it's Al-powered chatbots helping us to service our accounts or virtual personal assistants organising our lives, our voices are taking control. "Siri, ring Alexa and tell her to..."





Live video streaming

Twitter's live stream of the US presidential inauguration peaked at 6.82 million unique viewers.

It was also live-streamed on YouTube, Facebook, CNN digital and Fox News channel.



Virtual personal assistant

24.5 million voice-first devices expected to ship this year.

A remarkable increase from the 1.7 million voice-first devices shipped in 2015 and 6.5 million units shipped in 2016.



360 Video

360 camera market to grow by 34% from 2016 - 2020.



Chatbots Over 11,000 chatbots operate on Facebook Messenger.



Virtual customer assistants

WayBlazer uses natural language to give personalised holiday suggestions.





Is **live** the gateway to brand authenticity?

The proliferation and capability of live video streaming services are encouraging brands to give a fresh, authentic experience that audiences value.

Facebook Live serves to illustrate the importance of authentic, raw, inthe-moment content with audiences worldwide. Perhaps unsurprisingly, live streamed videos on Facebook are viewed at much longer durations (3x) than non-live content.

And if you thought live was big, live 360 is going to be bigger, literally. Following YouTube's rollout of 4K 360 live broadcasting, Facebook have announced initial support for 360-degree live streams, with National Geographic's Facebook page the first to publish live 360 video.

Live video streaming

Live video over the web and in apps is nothing new, but expect brands to take it far more seriously.





With the announcement that Instagram is introducing live streaming in the US, everyone and their dog (cat, hamster, raccoon) will soon be live streaming their everyday lives – but will anyone be watching?

Facebook Live has already begun to illustrate the importance of this authentic, in-the-moment content for audiences worldwide. Engagement is high – live content is viewed for three times longer than non-live content. This makes live an essential new channel for brands and influencers looking to build a more meaningful and genuine relationship with their target audiences.



Twitter's live stream of the US presidential inauguration peaked at 6.82 million unique viewers.¹²

It was also live-streamed on YouTube, Facebook, CNN digital and Fox News channel.





Image credit: Facebook

If you thought live was big, live 360 is going to be bigger, literally.

Following YouTube's rollout of 4K 360 live broadcasting, beating Twitter's Periscope to the punch, Facebook have also announced initial support for 360-degree live streams.

In conjunction with National Geographic, Facebook launched their 360 Live service to document as scientists emerged from 80 days of isolation in pods at Utah's Mars Desert Research Station in December 2016. The 360 option is now part of the Facebook Live API and the capability will be rolled out onto business pages throughout 2017. Fully immersive live VR experiences can now be realised – marketers just need to consider the most appropriate events to broadcast.

360 camera market to grow by 34% from 2016 - 2020.¹³



Will the rise of the new **bot army** provide better customer experiences?

From simple chatbots to AI-enabled virtual customer assistants (VCAs), bots are changing the way we interact with businesses and service providers, from answering customer queries to delivering services.

Twitter, WhatsApp and Facebook Messenger are all pushing bots heavily, enabling businesses to upload their chatbots and encourage interactions. Beauty company Sephora's bot suggests products, 'how to' videos and product reviews and, ultimately, lets people buy products based on answers to a few questions.

Bank of America has gone a step further with Erica, a voice-activated VCA that not only answers questions about personal banking, but will make suggestions on spending and alternative finance options. It's no surprise then that Deloitte predicts customer service jobs to be at very high risk of automation in the coming years.

Chatbots and VCAs

Are the days of the human call centre numbered? Perhaps for simple tasks.

Chatbots have the potential to be a major disruptor. Today you can order a pizza from one, but in time chatbots and VCAs could replace your average call centre worker. As consumers continue to seek personalised experiences, VCAs, powered by AI and personal data, will assist us with direct tasks and provide advice on how to live our lives smarter.

Keen to capture more revenue, Twitter, WhatsApp, Kik and Facebook Messenger are embracing this technology's potential.



Over 11,000 chatbots operate on Facebook Messenger alone.¹⁴

Bank of America has gone a step further with Erica, a voice-activated VCA that not only answers questions about personal banking, but will make suggestions on spending and alternative finance options.

Elsewhere, beauty company Sephora launched a bot on social platform Kik. It asks users a few questions then suggests products, 'how to' videos and product reviews and allows users to purchase products without leaving the platform.

Given the personal, targeted powers chatbots have, it's not surprising that the global chatbot market is predicted to be worth \$994.5m by 2024.¹⁵ The impact of this kind of automation could be considerable – Forrester have suggested that 6% of all US jobs will be eliminated by 2021 starting with the customer service sector.¹⁶

Despite this, the technology is still in its infancy. Many experiences continue to be poor, but **those first mover businesses**, **implementing solutions now, will reap the benefits** further down the line.



Christopher Bot prompts school kids to log their homework at the end of every lesson and then sends them a summary at the end of every day... but with a sense of humour.



Will **virtual personal assistants** organise our lives and reduce friction?

Once the reserve of smartphone operating systems, virtual personal assistants have migrated to the desktop and an increasing number of 'assistive' devices.

Amazon's Alexa can play music on voice command, read emails, reply to questions, interact with other smart home devices and more. Patent filings suggest Samsung's AI assistant will be called Bixby and can recognise real-world objects through the Galaxy S8's camera. These are then tracked down online, allowing users to make quick purchases.

And car manufacturers including Ford are looking to put Alexa into its next generation of cars.

The next generation are ready for this: 84% of 14 to 17-year-olds surveyed in Accenture's Digital Consumer Survey use digital voice-enabled assistants.



Virtual personal assistants

Mixing AI with voice recognition, virtual personal assistants could be organising our lives very soon.

Think Amazon's Alexa, which already has some 7 million users.¹⁷ Coupled with Amazon's Echo unit, Alexa can play music on voice command, read emails, reply to questions or interact with other smart objects.

Connecting to devices like Nest, smart lights or locks it's easy to see VPAs taking control of our home environments. Ford is looking to put Alexa into its next generation of cars while Emotech's Olly system will develop a personality based on its interactions. What's more, the next generation are ready: 84% of 14 to 17-yearolds surveyed in Accenture's Digital Consumer Survey use digital voice-enabled assistants already.¹⁹

With voice-related search predicted to reach 50% by 2020 it is essential digital communications professionals begin including more conversational 'long tail' terms throughout their online content.



24.5 million voice-first devices expected to ship in 2017.¹⁸

A remarkable increase from the 1.7 million voice-first devices shipped in 2015 and 6.5 million units shipped in 2016.



Opportunities



Chatbots

Direct new customers to product information and sales contacts with natural language messaging bots. Gather data throughout the conversation to enrich your CRM.



Live

Broadcast interviews from events and trade shows. Let your audiences experience business firsts and product launches as they happen.



Virtual personal assistants

Be the first to answer Siri with natural language search optimisation. Maintain and build on your current rankings as voice becomes the dominant method of search.

Influencers

The technologies, social dynamics and commercial imperatives shaping the digital communications landscape.



Technologies



AI and machine learning

Google, Microsoft, IBM and Facebook are all investing heavily.

Over \$1.2bn of funding was pumped into AI startups in 2016. Google have just announced they're bringing AI to the Raspberry Pi so children can use it for their projects.



Big data

Big data market to grow from \$130bn in 2016 to \$203bn by 2020.

The banking industry is expected to be a big driver of this increase in spending, while IT and business services will lead most of the tech investing.

Blockchain



Blockchain industry is worth \$210m, predicted to grow to \$2.3bn by 2021.



Industry 4.0

European industrial companies to invest 3.5% of annual turnover in 4.0 initiatives.



Internet of things

Global spending on IoT technology predicted to exceed \$450bn by 2020.





Autonomous vehicles



AI and machine learning

Sci-fi dream or dystopian nightmare for some, artificial intelligence has developed rapidly... but don't get too excited.

Much of the progress has been in machine learning, where faster processing has allowed computers to understand both data and physical stimuli, generating responses that resemble human behaviour. This, however, is not intelligence.

Whilst machine learning improves, defining artificial intelligence remains contentious. Although programs have passed the Turing test (the ability for a computer to fool a human into thinking it is in fact a human), creating a conscious intelligence capable of creative thought remains a distant reality.

A particular example of this is Microsoft's Tay AI chatbot which had to be shut down in 2016 after it started tweeting racist and profanity-ridden statements it had 'learned' from other users.

With endless possible applications, Google, Microsoft, IBM and Facebook are all investing heavily in this area; over \$1.2bn of funding was pumped into AI startups in 2016 alone.²⁰

Leading the pack is Nvidia, which among other high-level projects, has provided the technology for automotive company Tesla to bring self-driving cars to the road. With the transportation industry alone worth \$10tr, it's not surprising Nvidia's stock rose 220% in 2016.²¹ Its technology is also being applied to healthcare to speed up data processing and drug development.

Google, Microsoft, IBM and Facebook are all investing heavily.

Over \$1.2bn of funding was pumped into AI startups in 2016 alone.²⁰ Google have just announced they're bringing AI to the Raspberry Pi so children can use it for their projects.

Tesla 'Autopilot' matches speed to traffic conditions, will switch lanes automatically if required and can even be summoned from your garage.



Big data

Big data is a buzzword for a reason – it offers a unique opportunity to radically change the way we do things.

By analysing huge data sets to reveal patterns, trends, and associations, especially in human behaviour, we can transform the way we develop products, advertise or even treat diseases.

Firms such as PwC, Accenture, SAP and Oracle are leading the way when it comes to big data solutions, and are already working with major global brands to unlock insights and improve business processes.

The IDC reports that the big data and business analytics market will grow from \$130bn in 2016 to \$203bn by 2020.²² The banking industry is expected to be a big driver of this increase in spending, while IT and business services will lead most of the tech investing.

As well as providing business insight, big data is being used in increasingly innovative ways to positively impact society.

In Costa Rica, the Ministry of Women's Affairs reported that incidents of domestic violence increased by up to 680% during football matches. To help tackle this issue they teamed up with sports network Teletica and the soccer federation to create 'the Second Scoreboard'. It displayed a live counter of domestic violence incidents alongside the regular scoreboard during soccer matches.

As well as massively raising awareness of the issue across the entire population (understandably this went viral across social networks and was even a topic of debate in the national congress), the number of domestic abuses reported dropped by 40%.²³

Big data market to grow from \$130bn in 2016 to \$203bn by 2020.22

The banking industry is expected to be a big driver of this increase in spending, while IT and business services will lead most of the tech investing.

Blockchain

Blockchain has the potential to disrupt almost every industry, including yours.

Blockchain initially came to prominence as ultimate tech disruptor, Bitcoin, back in 2008. For many years, its use was synonymous with crypto-currencies but more recently the most innovative entrepreneurs have been applying blockchain principles to a myriad of industries.

Blockchain giants Ethereum have taken the concept a step further by creating smart contracts: a predetermined set of rules governing an organisation which are automatically honoured via the blockchain as transactions occur. These contracts essentially remove an entire layer of bureaucracy between supplier and recipient and could eventually be used to replace the management of an organisation (suggested by CEO Vitalik Buterin).

In the responsibility/sustainability space, trailblazers Provenance have created a blockchain for displaying the sourcing information of everyday products. They've created a blockchain – currently being trialled by Co-op Group – to allow the consumer to transparently view the entire supply chain of fish products from net to shelf. This aims to help eradicate the use of illegal fishing methods and slave labour.

Everledger have used a similar concept to track the provenance of diamonds helping to quash the trade for so-called 'blood diamonds'.

Currently the blockchain industry is worth \$210m with MarketsandMarkets predicting this will grow to \$2.3bn by 2021.







A Knapp AG employee uses an AR headset to improve his performance. Error rates have dropped by 40% using this techn

The latest industrial revolution, but with significantly less smoke.

Industry 4.0 refers to the enhanced digitisation of the manufacturing sector. It combines a range of disrupting technologies and techniques that together, significantly reduce manufacturing costs and can boost sales. Examples include utilising insights from big data, bringing AR (augmented reality) into the production process or implementing AI (artificial intelligence) to streamline physical inventory.

By analysing the number of options chosen via their online tool and offline sales data, one car manufacturer decided to strip back the number of bespoke options they offered by around 50%. The added efficiency in the production process meant their margin increased nearly 30% in 24 months. Logistics company Knapp AG introduced AR headsets to improve the accuracy on their production lines. Headsets overlaid vital data on-screen so their workers could locate items more quickly and precisely. As a result, error rates fell by 40% and production output increased.²⁶

These principles can be applied to product development too. By bringing together vast data sets from different systems (marketing, customer surveys or sales data) customer needs and demand can be more accurately estimated. This improved the chances of new products hitting the mark with consumers.

With European industrial companies planning to invest nearly 3.5% of their annual turnover in 4.0 initiatives over the next five years,²⁵ expect such success stories to become commonplace.



European industrial companies to invest 3.5% of annual turnover in 4.0 initiatives.²⁵



Internet of things

Imagine if your fridge could re-order the milk when you are running low.

The Internet of Things (IoT) is a blanket terminology to describe the inter-networking of physical everyday objects. These objects are embedded with electronics, software, sensors, actuators and network connectivity that enable them to collect and exchange data.

Major players include those companies that provide the software to connect devices with the end user, and the manufacturers that are producing consumer-based products such as fridges or lightbulbs. Think Google, Microsoft, Cisco, IBM, Amazon, and so on.

Global spending on IoT technology-based products and services by enterprises is predicted to exceed \$450bn by 2020.²⁷ The prevalence of connected environments is helping to fuel this trend – see the next page for more on this.



Global spending on IoT technology predicted to exceed \$450bn by 2020.²⁷



The Nest 'Learning Thermostat' learns your heating habits and automatically adapts to match your requirements.

Connected environments

Self-watering public gardens, parking spots that issue permits and lamp posts that sense your presence.

Connected environments utilise the internet of things to create an enhanced, more efficient and often more environmentally friendly solution or experience for end users. The way we interact with our environment, from a university campus to an entire city or country, can be profoundly altered when these technologies are implemented.

Smart cities are a macro example of how connected environments are already effecting change. Barcelona has been implementing IoT initiatives since 2012 across urban systems including public transit and waste management, yielding significant cost savings and improving residents' quality of life.

For drivers, Barcelona implemented a city-wide sensor system paired with a mobile app to guide users to available parking spaces and take payments.

The programme has helped reduce congestion and emissions while taking over 4,000 payments per day in the process.²⁸

On a smaller scale, but arguably more disruptive for its industry, Amazon have recently opened their bricks and mortar store, Amazon Go. Using a combination of computer vision, machine learning and artificial intelligence customers can select their groceries and leave the shop without having to queue at a checkout.

Customers simply scan their phones to enter the store, select their items and are automatically charged through their Amazon account when they leave. Amazon have applied for the UK patent on this technology so we can expect to see Go stores appearing on our high streets over the next few years.



A passenger checks the progress of her bus at an interactive bus stop in Barcelona.

Investment in smart cities is estimated to grow from \$312bn to \$757bn by 2020.²⁹

Ubiquitous connectivity



The internet allows for infinite possibility and incredible opportunity, but unfortunately 4.9 billion people still aren't online.

We take internet access for granted – nearly 90% of residents in the UK, US and Australia have it. But, as Mark Zuckerberg has pointed out, this is not the case globally. Nearly two-thirds of the world's population (approximately 4.9 billion people) have no access, despite 85% of people living in areas with existing cellular coverage.³⁰

The growth of internet availability is slowing down as mobile providers run out of emerging middle classes to target, so it falls to philanthropic efforts to connect the very poor. Enter internet.org, a Facebook initiative focused on connecting everyone to the internet.

Thanks to the development of advanced technologies in their 'Connectivity Lab' and by brokering deals with existing mobile carriers, internet.org now provides free access to around 300 websites (including Facebook), to over 25 million people in 37 countries.³¹

Among other things, the lab has created a fleet of autonomous solar-

powered aircraft, capable of flying for months at a time, which beam internet to the land below (see: Drones).

Providing connectivity to disaster areas is essential to help facilitate effective communications: charity 'Disaster Tech Lab' has mastered the rapid deployment of such networks. To assist further they have trialled the deployment of drones which can geolocate potential survivors though Wi-Fi and cellular signals.

On the brand side, Toyota LandCruisers are being used to create a Delay Tolerant Network (a NASA methodology for communication in space), in the Australian outback – an area roughly the size of Europe with no connectivity.

An emergency signal transmitted via Wi-Fi is passed on from LandCruiser to LandCruiser until one of the vehicles is within mobile network range. This triggers a communication to the emergency services who can then locate and rescue the stranded party.



Drones

When it comes to drones and autonomous vehicles, a surprising amount of the future is already here.

Since drones were first used in Afghanistan in 2002, their use has grown to the point where PwC now values the market for drones with commercial applications at \$127bn.³²

Players are as varied as the applications themselves, but it's estimated Chinese tech company DJI currently holds around 70% of the commercial market. From delivery services like Amazon, to infrastructure with Network Rail's railway monitoring ORBIS, there are few avenues that aren't being examined. Perhaps most interesting is Facebook's use of plane-sized solar-powered drones to act as Wi-Fi network carriers in remote areas.

The disruptive implications that drone technology offers should not be underestimated. The technology is available; it is simply a matter of time until legislation is adapted to allow for more ubiquitous use. Then the sky really is the limit.



Autonomous vehicles

Flying taxi drone anyone? Only in Dubai.

Partial automation has been around for some time: autopilot systems have existed since 1912 for example, but the race for full automation is now at its most intense. Google, Uber, Tesla and more traditional car manufacturers are all hoping to get a considerable slice of this lucrative market.

Lockheed Martin have developed pilotless systems for use in fire helicopters, allowing pilotless flight and therefore removing potential danger to pilots.

For the very brave, the newly announced Ehang 184 is a oneperson drone designed to transport passengers over short distances -Dubai will be using these for its new taxi service as early as July 2017.

Whilst aviation boasts some impressive examples, the biggest market for automation remains automotive. Tesla has announced that as of 2016 all its cars, including base models starting at around £25,000, are being shipped with the technology that will allow them to drive independently requiring only calibration and activation.

Daimler has already road-tested an autonomous lorry on German roads and the UK government has indicated such trials will soon begin in the UK.

Autonomous vehicles will deliver considerable economic and environmental savings particularly in the logistics industry. With the right technology, driverless vehicles will find the fastest routes with least traffic, executing deliveries safely without the need for rest stops. Perhaps this is the reason why Uber recently purchased autonomous truck company Otto for \$600m - an unsettling thought for the 3 5m truck drivers in the US

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Boston Consulting group see the autonomous vehicle market being worth \$42bn by 2025.33

Social dynamics

Wellness and healthy living

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PwC predict the connected health market will be \$61bn by 2020.

This represents 33% average annual growth over this period with 1.7 billion people expected to download mobile health apps by 2017.

Social influencers



70% of millennials relate more to YouTube creators than to traditional celebrities.

With 64% buying based on their recommendations.

Climate change & resource scarcity



By 2030 global demand for food is expected to be up 35%, demand for water will increase by 40% and energy by 50%.

Sustainable consumerism



75% of consumers agree they would pay more for environmentally friendly products.

Urbanisation



Just over half the world now lives in cities but by 2050 this proportion will rise to over 70%.





Wellness and healthy living

Attitudes have shifted from fad dieting towards healthier lifestyles generally - for brands that react, there are many new customers to win.

The Body Coach (aka Joe Wicks) became an overnight internet sensation by spotting this trend early. His #LeanIn15 mantra, executed through a combination of training videos on YouTube and protein-rich, carb-light recipes on Instagram has generated a social media following of over 2 million.

PwC predict the connected health market will be US\$61 billon by 2020.³⁴

This represents 33% average annual growth over this period with 1.7 billion people expected to download mobile health apps by 2017.

Whole food specialists Hemsley & Hemsley have also capitalised. Initially advising celebrities on their diets, they are now celebrities in their own right – launching a host of cook books and even a shop in Selfridges.

Health-focused gadgets are also selling in record numbers with 49% of the wearable tech industry falling under this umbrella. In the US alone, 90% of 18 to 24-year-olds said they would engage in health activities through social media, meaning brands have a large opportunity to engage with their audiences and should be considering how best to capitalise now.



From bloggers to vloggers, tweeters to Instagrammers, social influencers command large and loyal fan bases that savvy brands can leverage.



70% of millennials relate more to YouTube creators than to traditional celebrities.³⁵

With 64% buying based on their recommendations.

Influencer marketing is an increasingly important part of the marketing mix and all signs suggest this will continue to grow. It's not just brands and marketing teams that use influencers; corporate communicators have long understood the reputational upside of positive third-party commentary, even reaching out to brand endorsers at times of crisis to set the record straight on their behalf.

Influencer marketing not only provides brands with content flow but with ad blockers (used by a quarter of PC users) increasingly restricting traditional web ads, influencers provide a more reliable outlet for distribution.

It's this reach to an already engaged audience that is the main benefit of influencer marketing. Emirates worked with vlogger MRJWW to advertise their new supercar cargo service. The video generated a reasonable 69K views on Emirates' own channels, but 800K on the vloggers demonstrating the power of audience targeting.

Brands are now moving beyond single influencers to create influencer "squads" like the L'Oréal Beauty Squad, who can significantly increase overall reach without diminishing engagement levels. It's been shown that engagement levels decline when follower levels become excessive, leading to the growing interest in 'micro-influencers'.

Adidas have taken this a stage further hoping to tap into the 70% of brand referrals that happen on dark social³⁶ – encrypted direct messaging apps such as WhatsApp. They are working with communities of hyperconnected football obsessives, socially savvy 16 to 19-year-old content creators, to post mobile optimised selfie-style content on messaging platforms before Adidas's official channels.

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Agricultural revolution

Sustainable food production is more than healthy eating and reducing environmental impact; increasingly its focus is how we meet growing demand.

According to the UN, the world population will have increased by 3bn by 2050,³⁷ with 70% of this enlarged population living in urban areas. An additional agricultural landmass the size of Brazil would be needed to feed these people using traditional farming methods. But, as we can't grow land, an agricultural revolution is required to meet this growing demand.

From farmers and ingredient suppliers to food manufacturers and retailers, everyone involved in the food supply chain will need to demonstrate a commitment to meeting the world's food needs sustainably.

This agricultural revolution takes many forms from drone delivered precision farming and towering vertical farms, to the reclamation of urban spaces to grow crops.

'Growing Underground', an underground urban farm, has recently signed a distribution deal with online food retailer Ocado. The UK's first underground farm, housed 100 feet beneath Clapham High Street in a World War II bomb shelter, uses hydroponic systems and LED technology, to grow a consistent crop all year around.

The process is highly sustainable, requiring low levels of energy and zero pesticides and, with a central location, reduces wasteful 'food miles'.

AeroFarms in New Jersey, the world's largest vertical farm, uses algorithms to continually monitor nutrients and lighting at different points in the plants' growth cycles. As a result, operators are able to affect the overall colour, taste, texture or yield of the final product. "We can make watercress spicier and lettuce sweeter," explains co-founder Mark Oshima. At full capacity, the facility produces around 900 tonnes of vegetables a year, which helps explain why the vertical farming industry is predicted to be worth \$3.8bn by 2020 – a 30% year-on-year growth.³⁸ **Experience** economy



Mintel projects spending on experiences will increase 27% by 2020.³⁹

Guests enjoy some food and drink courtesy of irbnb's 'Craft Food Connoisseur' tour of London.

Consumer spending continues to shift away from 'stuff' and towards experiences - people want Instagrammable, shareable experiences and brands are wising up. In the UK, spending on recreation and culture increased 8% in 2016 whereas spending on clothing and footwear fell by 2.8%.⁴⁰ Mintel have also predicted a 27% growth in spending on experiences by 2020³⁹ – we believe this is a trend that will continue in earnest that savvy brands can profit from.

As Carla Buzasi of WGSN explains, "Brunch with a friend followed by a yoga class might cost about the same as a new pair of jeans, but you don't get that warm glow of a shared experience with the latter." This sentiment presents a clear opportunity for marketers.

In an age where consumers are using ad blockers to avoid traditional advertising, marketers can embrace consumer preference for experiences and divert their spending accordingly.

Brands have been deploying experiential campaigns for decades, but the smartest businesses weave experiences into their offering. Early examples such as LEGOLAND and Red Bull's Air Race have been wildly successful and it seems more and more businesses are following suit.

More recently, Airbnb have launched their 'Experiences' service where local experts offer quirky guided tours of their city – foodies can now explore London over three days with the 'Craft Food Connoisseur' for example.

Companies should consider experiences strongly related to their products if they want to take advantage.

Urbanisation



Just over half the world now lives in cities but by 2050 this proportion will rise to over 70%.⁴¹

Megacities and megaregions are becoming a reality - businesses need to pivot their strategy to react.

Urban distribution networks, product offerings aligned to city living and even store formats will need to be considered and reflected in company communications.

Urban sprawl has meant cities have begun to connect, forming vast 'megacities' with more than 10 million inhabitants. In 2016, there were 31 megacities globally but that number is projected to increase to 41 by 2030.⁴¹ These areas will experience a 'youth bulge' as observed in today's fastestgrowing cities, leading to a high proportion of 15 to 24-year-olds presenting opportunities for marketers.

Furniture company IKEA has released its PS 2017 collection, designed specifically to complement the needs of an increasingly urban population. Its range of space-saving furniture designed for portability act as a kind of millennial clickbait, appealing to the micro-apartment dwelling 'nomad'. We predict more innovations like this from other sectors designed to capitalise on the needs of urban millennials.

Alongside the rapid growth in developing nations, old infrastructure in developed nations presents business with new opportunities. According to management consultancy Bain, much of the critical infrastructure in developed countries will need to be replaced to sustain further growth. This combination presents a trillion dollar global opportunity for those companies able to pivot and capitalise.



Sustainable consumerism

Consumers are increasingly mindful about the production process behind the products and services they buy. Businesses can capitalise by telling their story.



Sustainable consumerism/consumption is the use of products or services that have a minimal impact on the environment through their production.

A global Synovate survey in 2008 found that consumers are willing to act on environmental concerns by changing their consumer behaviour as illustrated below⁴²

Reported behaviour change	2007 (%)	2008 (%)
Saving power	76	81
Recycling	65	70
Reducing water consumption	65	69
Using less packaging and bags	56	68
Buying green products	53	61
Buying energy efficient devices	53	59
Informing oneself about climate change	46	58

Source: Synovate/Aegis, 2007; Synovate/BBC World 2008.

Additionally, in a study by Tandberg, 75% of respondents agreed that they would pay more for environmentally friendly products⁴³ so it is clear businesses that communicate their sustainable production credentials could benefit.

We do not believe that sustainability credentials should be at the forefront of marketing strategy, but authentic stories used alongside traditional cues will have a positive impact.

As Amy du Pon, Global Head of Data Insights at Havas Media Group, suggests, "A company's sustainability efforts should be built into their core DNA."

By bike, by foot, by boat, our team visits some of the remotest villages in Madagascar to train, guide and audit our farmers. No farm is too far.

Knowing where our vanilla comes from is one of the most important. things for our business. But implementing the traceability of products is much more complicated than it sounds. "Unlike in many developed countries, we can't collect and analyze data with completely automates systems," explains Jean Victor Rhaharijaona, who heads up the sustainability program alongside Laurence Briand. "The power supply here is unreliable, and many of the farmers we work with live in remote areas and are not able to read or write."





Our inspectors visit every farmer we work with, recording important data, offering training and improvement plans and ensuring farmers not only comply with standards, but also understand why they're important for them. "

To overcome these challenges, we needed a new approach. "We employ internal controllers, many of who were vanilla farmers. that are trusted and respected by their communities," explains Jean, "It's with the help of these controllers, who actually go out and visit farmers, that we're able to record important data on farms, villages, local terrain and more more. They also audit the compliance of each farm with SAN (Sustainable Agriculture Network) criteria as well as proposing annual improvement plans and supporting farmers with regular training. In this way, we're able to track our supply chain and ensure that we're really helping the farmers that we work with."

A excerpt from Symrise's Vanilla website explains their sustainable production processes.

Demographic change

Global demographics are changing rapidly – people are living longer and developing nations have lower infant mortality rates than ever before.

Commentators have noted greater affluence and smaller numbers below the poverty line and a considerable shift of populations out of rural areas.

The percentage of over 60s is already higher than those under 16, and by 2040 studies estimate that one in seven people will be over the age of $75.^{44}$

This will have a significant impact on the way our society will operate and this was the central focus of the 'New Old' exhibition at London's Design Museum. The concept of the exhibition focused on the idea that the older generation of the future will have very different expectations to the current elderly population.

Attitudes among older generations are already beginning to shift and some brands have responded, pivoting their marketing to reflect this. Barclays, recognising the greater acceptance of online banking, launched 'Digital Eagles' to further boost the confidence of the less digitally savvy.

Companies that don't respond to this change are in serious danger of missing opportunities as David Cole, MD of Fast.MAP, points out:

"Marketers are missing the point with their campaigns... The over 50s are the audience with the money and yet this audience doesn't relate to the advertising that marketers are producing... half of over 65s believe that advertising does focus on younger people and more than twothirds don't relate to advertising they see on TV." – David Cole, MD of Fast.MAP.



By 2040, one in seven people will be over the age of 75.44

'Scooter for Life' designed by PriestmanGoode. As the user ages the scooter can be modified with a motor, seat and even self steering GPS.

These multi-purpose tower buildings in Nanjing China are 'vertical forests' designed by Stefano Boeri. Due for completion in 2018, they will remove CO₂ from the atmosphere and produce oxygen thanks to the 3,300 trees and shrubs growing from the structures.

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With 197 countries signed up to the Paris Agreement, businesses across the world will need to demonstrate their commitment to the environment too.

This will obviously have a greater impact on some sectors such as manufacturing, mining, and oil and gas, but every company with a significant physical presence will need to demonstrate and report a commitment to reducing its environmental impact in response to a new EU directive.

The directive on disclosure of non-financial and diversity information requires around 6,000 large companies listed on EU markets to disclose relevant environmental and social information in their management report, with the first reports to be published in 2018.⁴⁵

Increasingly businesses are being driven to use less natural resources from water to raw materials through a combination of legislation and societal pressure. Despite this the growing population is expected to drive global demand for food 35% higher by 2030 with water increasing by 40% and energy by 50%.⁴⁶

We can certainly expect businesses to focus more on communicating their sustainability story and using it as a point of differentiation – not just with governments and NGOs, but with future employees and both B2B and B2C customers as supply chains come under increasing scrutiny. We should see an increased uptake of integrated reporting, like ArcelorMittal's most recent annual review.⁴⁷

Even marketers need to think about reducing their footprint with some brands experimenting with eco-friendly billboards. Our favourite, the Air Orchard billboard in Lima, creates pollution-free water to irrigate 2,800 lettuces given away to the local community every week.⁴⁸



By 2030 global demand for food is expected to be up 35%, demand for water will increase by 40% and energy by 50%.⁴⁶

Commercial imperatives

Social media advertising



Social media advertising spend will hit 20% of internet advertising in 2019.

Esimated to be worth US\$50bn, it will overtake newspaper advertising by 2020.

Content marketing



47% of B2B buyers consume 3 to 5 content items prior to engaging with a salesperson.

Content marketing spend in the UK is projected to increase from £125m in 2014 to £349m by 2020.

Personalisation of manufacture



3D printing market is expected to reach US\$30bn by 2022.

Personalisation of marketing



75% of consumers are more likely to buy from a retailer that knows them by name and makes recommendations based on past purchases.

Social media advertising

Ad spend through social channels has never been higher, but it isn't display ads driving growth.

Declining TV/radio ratings and print circulation have led advertisers to seek out alternative channels through which to pedal their wares.

Perhaps recognising this, social networks have tweaked their algorithms to reduce the free organic reach of company page updates. Facebook's organic reach has dropped from 49% to as low as 2% in recent years⁴⁹ with LinkedIn and Twitter following suit. This means advertisers need to 'sponsor' updates to ensure their content is seen by their target audiences.

The tactic has worked, with experts predicting social media ad spend will surpass newspaper ad spend by 2020, accounting for 20% of all online ad spend worldwide.⁵⁰

Temporary social media, like Snapchat or Instagram stories, have also created new opportunities for brands to connect with increasingly younger audiences – Snapchat now has more users than Twitter with 161 million daily users and 60% of Americans aged 13 to 24 use the app.

Paramount Pictures leveraged this to promote the new Mission Impossible movie, Rogue Nation, by hosting 'Mission Month', a series of 24-hour challenges introduced by Tom Cruise via a self-destructing Snap message ("this message will self-destruct in 3, 2, 1...").

It is hard to imagine a more appropriate marriage between technology and marketing and the results reflect this. The campaign generated over 65 million impressions in a single month.



Social media advertising spend will hit 20% of internet advertising in 2019.⁵⁰

Esimated to be worth \$50 billion, it will overtake newspaper advertising by 2020.



Content marketing





Airbnb's recent foray in to print - a spread from their coffee table magazine 'Pineapple'.

There is a content war raging but the victorious will pick their battles wisely.

Various factors are driving future trends in content marketing - new channels will continue to emerge and brands will continue to race to be the first to use them effectively. However, don't worry, the old faithful media like email and print will continue to be important.

Banner ads will probably die out in the face of ad blockers (2 in 3 millennials in the US use an ad blocker)⁵¹ so engaging content will become a more important weapon in the marketer's arsenal. When coupled with the reduction in free organic reach across social channels we believe spend on sponsored content will increase.

Content marketing expenditure in the UK is projected to increase from £125m in 2014 to £349m by 2020⁵² which seems to confirm the new-found need given the reduced

impact of display advertising.

Content marketing is now relatively commonplace, so Gartner considers marketers to be on the 'Plateau of Productivity' in their maturity/ adoption 'Hype Cycle' (See page 5). As marketers become more sophisticated in measuring the impact of their outputs the frequency and quality of their content will change.

That means those already active will concentrate their efforts on fewer. higher quality pieces with longer lifespans. We think there will be a reduction in high frequency, low quality pieces cluttering up news feeds. Less really will be more when it comes to content in the future.

Joe Pulizzi, founder of the Content Marketing Institute, seems to agree with this synopsis:

"Five years ago, enterprises were spending 80% on content creation and 20% on content promotion. I believe this ratio has switched, with successful enterprises creating differentiated content and putting some advertising and promotion muscle behind it."53



Homeware store Tiger have enriched over 100k customer profiles with social media data allowing them to create extremely personalised marketing campains.

Personalisation of marketing

In today's multi-channel world, consumers are bombarded by brands vying for attention. 60% of content is ignored⁵⁴ so brands need to work smart to get noticed.

According to Accenture, 75% of consumers are more likely to buy from a retailer that recognises them by name, recommends options based on past purchases or knows their purchase history.⁵⁵ It is clear that personalisation can help brands stand out from the crowd.

Consumers too are willing to share personal data to facilitate a better buying experience (Magnetic/ MyBuys survey). Despite this, few brands venture beyond pre-filling personal details on a contact form and fewer still serve their users customised website content based on previous visits. So, the ball is very much in the court of the marketer to create new and innovative ways to use the data supplied to surprise and delight their customers.

Falcon.io is one such company helping brands like Carlsberg, Toyota and Diesel to achieve this at scale. The platform allows marketers to combine their social media channels with existing CRM data, constantly enriching customer profiles as they interact with the brand across social channels. Based on this data the marketer can then create personalised, contextrich campaigns to individuals or segments as and when certain behaviours occur - right content, right target, right time.



75% of consumers are more likely to buy from a retailer that knows them by name and makes recommendations based on past purchases.⁵⁵

Personalisation of manufacture



Sensor housing 'T25' – the first 3D-printed part certified by the U.S. Federal Aviation Administration (FAA) to fly inside GE commercial jet engines.

Need a spare part? Just send it to the printers.

Personalised manufacture has taken some serious steps forward over the past decade – whilst in the short term the consumer 3D print market is dying (3D Systems shut down their entire consumer unit in December 2015), outsourced 3D printing is gaining considerable share.

In-house units are often difficult to operate and expensive to maintain so most businesses are opting instead for third-party specialists who can provide 24hour production and delivery. A no-brainer for infrequent users.

This innate ability to transform a digital plan into a physical object will have a profound effect on industrial manufacture too. Companies of the future will simply fabricate items from their 'virtual inventory' as they are demanded, removing the expense of storing physical inventory. We could see specialist fabricators emerge, meaning companies will tap in to a network of production capabilities as and when they need them. Much like cloud hosting, an 'elastic manufacturing cloud' will emerge.

Eventually holistic manufacturing will see the end of parts being manufactured then assembled in multiple locations. Everything will be printed and assembled on the same site – GE are already doing this with the first 3D printed fuel injection system.

Consumer brands are also experimenting – Adidas recently trialled a new initiative at their Berlin pop-up store where customers can design their own merino wool sweater. After an initial body scan the sweater is fabricated instore within four hours. Adidas brand chief, Eric Liedtke, commented:

"If we can give the consumer what they want, where they want it, when they want it, we can decrease risk."

Opportunities



Technology

Use your data to engage more effectively with your audiences – combine data from across business units and mine for insights.



Social dynamics

Form relationships with relevant influencers and convert them into brand evangelists.



Commercial imperatives

Use serialised content publication to drive engagement with new customers.

Conclusion

Everything is changing the internet. So let's change *everything*.

Immerse audiences in your world, take customer service to new levels and rethink how and where you engage everyone that matters. The future is already here.

In the introduction we mentioned that many of the technologies we're talking about are in, or are just emerging from, Gartner's 'Trough of Disillusionment'. But as we've shown, that's not stopped businesses large and small putting them to good use.

With the vast amounts of money being invested in the tech sector and in many of these technologies specifically, by the time you've skimmed through this guide, one or more will have become closer to being the next smartphone – that indispensable digital extension of our lives we all take for granted.

So, what does this mean for digital communicators?

The easy answer is that our lives will get more digitized. As individuals, the frequency and variety of interactions we have with the digital world will increase significantly.

This wealth of new or maturing technologies will allow us not just to communicate with and entertain audiences, but to transform the way we interact and transact. Indeed, they have the potential to transform businesses, economies and ultimately society itself.

But, and there is always a but, as with every evolution - Darwinism will apply. Some concepts, technologies and businesses will flourish and others will fall by the wayside. So how can communicators make sure they're making the right choices?

Our advice is simple.

Forget the technology and the format – does the core idea work when it's stripped of a fancy delivery system?

Will the story resonate with your audience, demonstrate your shared values, inspire them to act or to share?

Will the service fulfil an untapped need, offer a more compelling solution or simply be easier or cheaper to use?

If the core idea doesn't work – its digitally enhanced implementation won't either! A poor story told in VR simply immerses your audience in a narrative that's harder to escape. A bad service idea delivered through a voiceenabled chatbot will frustrate potential customers with an unfulfilled promise.

But if the core idea does work, think how, when and why your target audience will discover, engage and act on it – and then the technology you should use to deliver it will become much clearer.

So if you're an early adopter looking to jump on the next big thing, or prefer to learn from your competitors' mistakes and are looking for some insight – drop us a line, the future is here.

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About this report

This report examines the technological, social and commercial factors driving change throughout digital communications. It is a forward-looking opinion piece based on the secondary research, knowledge and experience of the authors. It was written over a four-month period during which time we examined over 300 documents, articles and white papers to form the predictions within the document. If you require any further information or comment please contact <u>futurology@</u> investis.com.

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