JT's Tech Trends for 2020

JT's technology leaders give their views on the future of technology and some of their hot topics for 2020 and beyond.

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Technology advancements impact the way we all do things, often without us even realising – changing the way we live, work and play. Some of the smartest and well thought through digital innovations have now become a socially inclusive part of our everyday personal lives and affordable solutions for both small and large business communities, around the globe.

Here in the Channel Islands, we have access to some of the fastest internet speeds in the world, and with 5G on the horizon, our islanders and businesses have the connectivity they need now and well into the future.

Further afield, our thriving International business is growing at a rapid rate, with innovative connectivity solutions and security products driving market adoption, all being made possible by our 600+ roaming partners.

So what does 2020 look like?

With so much planned for the year ahead, we asked our global team of technology experts for their 2020 tech predictions and here's a round up of their hot topics.

Security

Assessing risks and solutions.

In May 2019 the world's most successful Ransomware as a Service hacker group, retired after banking over $2 billion. Cyber Threat Intelligence shows that this retirement, may only be temporary and suggests that they may come back in 2020 with an even more advanced threat.

With GDPR implemented, we are going to see the need to be able to demonstrate an effective Cybersecurity strategy. Having a tested and constantly reviewed Cyber Incident Response plan in place, means that when an organisation does face an attack and potentially loses customer data, it can demonstrate that its Cyber responsibilities were taken seriously.

With professional, organised crime syndicates working on an industrial scale, companies of all sizes are going to be a routine target. With the growing need to maintain effective protection, companies are going to have to turn to Managed Security Service Providers like JT who can offer professional SOC services on a 24/7 scale.

"Having a tested and constantly reviewed Cyber Incident Response plan in place, means that when an organisation does face an attack and potentially loses customer data, it can demonstrate that its Cyber responsibilities were taken seriously".

Jon Collinson
Head of Product Development

Building on Full-Fibre

Hyperfast Wi-Fi meets 5G.

Wi-Fi and 5G may be different technologies, but together, they will bring us much faster processing and wireless connection speeds than we can even imagine, thanks to the foundation of full-fibre. 2019 saw Jersey become the world's first full-fibre jurisdiction seeing, ubiquitously available speeds of up to 1Gb, which led to JT winning its highest accolade yet in October – 'The Best Network Transformation Award' at the World Communications Awards.

Fibre has become the fundamental building block in the Islands digital future, allowing us to commence our 5G testing. With this fibre backbone, our 5G mobile download speeds will be up to 10 times faster than before, providing a service and speed for the home, office and on the move, that is unparalleled.

This will improve efficiencies on a scale that we can't quite comprehend just yet, maybe because some of the technology that requires these speeds to function hasn't been released or even invented yet – but they will. The real value of our islands' investment will become apparent when our ability to apply faster data speeds to satisfy our demand for far more devices (and far greater data hungry ones) becomes effortless.

Today the average Jersey home has 39 devices connected to the Internet at any one time, and this is expected to rise significantly over the next few years.

Daragh McDermott
Director of Corporate Affairs

"Today the average Channel Islands home has 39 devices connected to the internet at any one time".

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Fibre

UK - Transformation of the last mile.

Unlike in Jersey, where every premise is connected to full-fibre, in the UK, Fibre has been the missing link in all these developments, and one that is still creating a lag on some of the UK's business innovation.

Luckily, 2020 sees the UK's transformation of the last mile. There is the UK government's Gigabit Voucher Scheme for fibre, the launch of 5G services and the availability of cost-effective SD-WAN solutions, even the imminent arrival of SpaceX's Starlink Internet service. Which will all enable Managed Service Providers to deliver high-speed and reliable connectivity to businesses.

We are moving to an era of fault tolerant business application networks overlaid on an array of technologies. This will finally allow businesses to offer Wi-Fi Guest services that actually work; shops will be able to take advantage of real-time analytics powered by the cloud to tailor their sales strategies; we may even achieve Connectivity as a Service where you only pay for what you consume, and the SD-WAN router working with an arbitrage service to buy the best connectivity at the best price in real time.

High-bandwidth always on connectivity has always been a limited resource but the UK are finally at the dawn of an age where it is available to any business and with JT's experience and learnings from the roll-out of full-fibre in the Channel Islands, it's safe to say we're in great position to advise our customers on the very best solutions for them, ahead of the last mile completion.

"Shops will be able to take advantage of real-time analytics powered by the cloud to tailor their sales strategies".

Elliott Mueller
CEO, JT Global Enterprise

CX

Digital-first customer experience.

In a way, digital-first customer experience (CX) is the trend that encompasses all others. In 2019 44% of companies had already moved to a digital-first approach for CX, and as adoption increases this will grow even faster in 2020.

Our approach at JT is to always be looking for new products and tools which help us provide quicker, easier and more efficient ways to service our customers. 79% of our retail consumers now shop and manage their services from their smartphone, so it's easy to see why digital services are the investment of the future. Self-help videos and tools, and Virtual Assistants are now the norm and we'll see an influx of new, intelligent technologies coming onto the market, driven by customer insight.

Here at JT, the voice of our customer is at the heart of all we do and we couple this with technological innovation. In 2019 we developed an in-store Smartserve tablet for our Channel Island based stores, allowing retail advisors to engage with customers in a much more collaborative and transparent way - reducing transaction times by providing real time data and dynamic credit checking.

Embracing digital enhancements and knowing what matters most to our customers is how we approach change. So 2020 will see many more exciting developments for us, including Smart Field Engineering and AI led assistance.

Tamara O'Brien
Head of Customer Experience

CUSTOMER REVIEW

Great Customer Services

★ ★ ★ ★ ★
Joanna Prinze

I had a great customer service experience with this shop. Product quality as well!! Many thanks. I highly recommended!

Excellent !!!

★ ★ ★ ★ ★
Pual Brianzary

I bought this product and it arrived in perfect condition. Very impressed and everything is fine, super quick response. I will buy it again for su

"Engage with customers in a much more collaborative and transparent way".

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Voice

Enjoy the sound of your own voice?

The adoption of voice technology continues to surge with assistants like Amazon's Alexa and Google Assistant becoming household staples. 2020 will see a vast increase in how businesses adopt these technologies to enhance their own customer experience.

Already, 91% of businesses have started to make investments in voice platforms for their employees and customers. 71% of those seeing voice technologies improving their user experience based on personal habits.

This is a huge selling point for tech retailers, and we've grown our own stock range based on our customers feedback and their growing demand for these popular products.

People already use voice for a wide range of straightforward tasks including driving directions, checking the weather and playing music. However, most say they wouldn't use it for more complex tasks like personal banking (61%) or booking travel (52%), I predict, this change will begin in 2020 as people become more comfortable with voice technology.

This journey towards more conversational and complex engagements means voice experiences will become both highly intelligent and user-friendly for all walks of life, and as intuitive and trusted as the touchscreen is today.

Dominic Vye
Head of Commercial Development and Customer Management

"This journey towards more conversational and complex engagements means voice experiences will become both highly intelligent and user-friendly for all walks of life".

Facial recognition

Using your face to interface.

Voice recognition was one of the first biometrics to become mainstream, recently joined by face ID Apart from the novelty value, biometrics are now starting to populate the frontline in the battle against hackers and identity thieves.

Pioneered to a mass audience with the iPhone X, facial recognition is now being explored beyond the confines of just our mobile devices. It is set to play a starring role in the smart revolution, providing access to anything from our own homes and bank accounts, to enabled ATMs. Not only will this make life trickier for criminals, it also releases the rest of us from the burden of remembering or storing passwords.

Facial recognition will produce the access needed in the digital community of the future, whether it be specific to digital identity and payment of utility bills or the ability to take part in impact measured training in which eye movement, facial expression and blink periods will track engagement and the likely success rate.

As well as offering a new level of potential security, biometrics may offer breakthrough technology which makes the world a more accessible place for people with physical impairments and 2020 will see businesses start to explore this.

Marcus Irwin
Head of Solution Design

"Facial recognition will produce the access needed in the digital community of the future".

IoT

The increasing need for cellular-IoT.

The advent of cellular-IoT is seeing more connected devices move away from traditional 2G/3G/4G connectivity to lower power licensed radio networks, such as CatM-1 and NB-IoT.

Not the catchiest of names, but their adoption promises to make the Internet of Things (IoT) a truly ubiquitous phenomenon next year. Being very low power, they are specifically designed to support devices that require very low rates of data transfer, transmitted very infrequently. This, in turn, means future devices can be smaller and have extremely long battery lives. For instance, a sensor placed on a coast to detect landslides needs only to transmit tiny amounts of data when it detects a seismic event, which could be as little as once a year. Smaller, cheaper devices requiring less maintenance can be deployed en masse, generating vast amounts of data that can be analysed and curated with extremely beneficial outcomes.

JT is actively engaged in the testing of these new radio technologies and the security protocols that will support their safe adoption. We are already working with our partners to provide services across their networks globally and bringing the benefits of cellular-IoT back to the Channel Islands for 2020 availability.

"Future devices can be smaller and have extremely long battery lives".

Ian Lavigne
Head of Products, JT International

Smart Life

Our new reality.

Self-drive cars, independent drones and smart cities are all edging their way closer to being part of our present rather than a sci-fi future.

As fiction and then as prototypes, they have captured the popular imagination over the past few years, but now the enabling technology is catching up. The combination of edge computing (which allows data produced by IoT devices to be processed closer to where it is created to reduce latency and bandwidth use) and 5G is now allowing and supporting the innovations which will help manufacturers to make them a reality.

Tesla, may be one of the first industry names to spring to mind when it comes to driverless cars but as the alignment between technology and transport manufacturers gathers pace, Elon Musk won't be the only entrepreneur making a bid to produce a historic first. Companies like Intel/Nvidia/Qualcomm and BMW/Volvo/Ford are partnering up, Uber is developing an autonomous fleet and Amazon is investing in the future of delivery via autonomous drone, which will change the retail industry forever.

The future is looking smarter and smarter.

Sally Russell
Head of Service Design

"The combination of edge computing and 5G is now allowing and supporting the innovations which will help manufacturers to make them a reality".

Women in tech

Gender diversity drives technical innovation.

We're already seeing an increase in women in technical roles, but next year I believe this will increase further as more women apply for digital positions in future-focused innovative organisations. But what's driving this trend?

Firstly, the growth of digital innovation has impacted everyone – it improves our daily lives, providing tangible and exciting opportunities that are accessible to everyone.

In an era where 'making a difference' is now more of a driver than ever, what better industry is there to be a part of? As Artificial Intelligence (AI) drives more technology decisions, we'll see an increase in the number of women in key decision-making roles across all industries. As more technologies are invented to interact with humans, these devices require greater emotional intelligence to be effective. The trend to be able to sense and communicate with human emotions is upon us and it is those skills that are often associated with, but not exclusive to, the female brain.

With this is mind the tech brains of the future, regardless of gender, will need to lean more towards the emotive side of design in order to bring AI closer to the 'real' interactions that the market demands.

Nicola Reeves
Group HR Director

"The high-skill, high-pay jobs of the future may involve skills better measured by EQ's than IQ's".
Andy Haldane, The Chief Economist at The Bank Of England

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Hybrid connectivity

Navigating through communication options.

The world of customer device connectivity is expanding rapidly – not only with many new entrants providing connectivity, but also with the actual types of connectivity that are available now or will be in 2020 and beyond.

Buyers are understandably confused when deciding on 'the right fit', future proofed, connectivity options for them. There is often no 'one size fits all' answer to these questions, and with 4G, 5G, NBIoT, Cat-M, LoRa and Satellite (to name a few) all shouting for attention in the marketplace, it is difficult to know where to start.

Increasingly JT is being asked by global businesses to be their 'trusted advisor' and help them successfully and safely navigate through this decision process. Often, this results in recommending more than one communication technology, all working in concert to create the optimal 'Hybrid Connectivity Solution' in order to bring together different strengths and capabilities required by the solution stack and ultimately the end user.

A real-world example of this, is the use of LoRa connecting a remote Sensor Network, back-hauling to the cloud via a dual Cellular- Satellite gateway, and controlled via a Bluetooth device interface by local users in the field. By overlaying Hybrid network connectivity with rapidly evolving Hybrid Edge- Cloud compute architectures, machine learning and the latest elastic platform services, clients can achieve a more flexible, efficient, and intelligent solution, delivering greater value at a lower cost than previously possible.

Craig Samuel
Senior VP, Americas

"Using more than one technology together to create the ideal 'Hybrid Connectivity Solution".

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Cloud

The renaissance of digital innovation.

The exponential growth of the public Cloud is continuing to transform our daily lives. It is predicted that by 2020 public IT Cloud services will account for 58% of the £355 billion Cloud spend. Industry Cloud-stored data is estimated to double in 2020 as the reliance on internal data systems reduces.

Cloud storage offers a logical filing system and the software providers are responsible for keeping the data accessible for its users. Regardless of your storage requirements, the Cloud is expanding its holding capability to support businesses of all sizes.

With careful use and well-targeted cybersecurity, tailored for your use and needs, there are many advantages to this expansion. Cloud offers users immediate access to an extensive range of resources and applications, without the need to host. This means that a number of associated tasks, like acquiring additional capacity, are done for you by the provider. This leaves you free to use the technology to do the job you actually want to, without any of the legacy problems that come with on-site hosting.

"It is predicted that by 2020 public IT Cloud services will account for 58% of the £355 billion Cloud spend".

Katie Corbett
Director of Enterprise and Business Services

To find out more about JT Cloud for your business, please visit **www.jtglobal.com/cloud**

AI

A new generation of intelligence.

Last year we predicted a real rise in the application of Artificial Intelligence (AI), and just like machine learning, AI is now almost an everyday reality which will continue at speed to have a widening impact across many industries. It's creating new ways of thinking, communicating and working. It has been predicted that global spending on cognitive and AI systems will reach £57.6 billion in 2020.

A new generation of intelligent applications and innovation are allowing devices to connect, learn and take action at an unprecedented rate, both autonomously and in the smartphone applications you use daily. The result is that there are increased platforms for the use of AI in sectors as diverse as the transportation of goods, to healthcare, to gaming and audit functions.

The use of AI and machine learning will continue to provoke legitimate debate on moral and ethical concerns, but there are, undeniably, technological advances which can be harnessed and will increasingly provide advantages in all sectors of the community.

Andy Parkin
Head of Jersey Software Delivery

"There are increased platforms for the use of AI in sectors as diverse as the transportation of goods and healthcare".

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