



The tech trends every business should know for 2017

By JT's CTIO, Thierry Berthouloux

With Brexit and a surprise win for Donald Trump, 2016 will be remembered more for political rather than technological change, but we still saw the first reusable rocket land back on its platform, the Amazon Echo launched in Europe, and drones became affordable ... and ubiquitous. But what will 2017 hold when it comes to technology?

Thierry Berthouloux, JT's Chief Technology and Information Officer, shares his thoughts on what 2017 looks like in the ever growing global arena.



In 2017, we can expect rapid tech adoption to centre on new technologies that bridge the digital/physical divide like virtual reality, the Internet of Things and artificial intelligence.

Here are eight seismic shifts, from cutting-edge technology and workplace trends to consumer preferences, that business leaders need to be thinking about and JT is ready to lead it's customers through.

According to market research firm Forrester, customers' intention to buy a new product or service when it first launches is five times greater than it was a decade ago. This faster uptake will force companies to focus on new technologies, to keep up with trend and technology progressions.



The Internet of Things

Internet of Things (IoT) dominated the headlines in 2016, but current adoption of IoT solutions and services has yet to evolve on a mass scale beyond industrial, automotive and B2B projects. However, Gartner Group are predicting that by 2020 there will be 50 billion things connected to the internet, and given that's only three years away, 2017 is the year that we will start to see a mass engagement by businesses in all sectors around their IoT strategy.

The IoT's ability to create and deepen relationships with customers and create the linkage between new customer front-end systems and operational back-end systems has largely gone untapped. But as business leaders move their attention to crafting differentiated experiences in 2017, they will create structured IoT approaches for more diverse use cases, create business insights at multiple levels of their organisation, and, ultimately, start to bridge the gap between the physical and virtual worlds.

JT have over one million JT SIM cards in devices around the world accessing the IoT and our business in this sphere has grown 130% in 2016. IoT is exploding, and JT are at the forefront, providing open-roaming solutions which allow customers to rely on the fact that they will always have connectivity, wherever they are

In 2017, expect to see more interactivity between devices to make our lives easier, safer, and more manageable.

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Big Data

The importance of Big Data in the business world can't be overstated. We know that there's an overwhelming amount of valuable data in the world, but few companies are using it to maximum effect. Analytics drive business by showing how customers think, what they want, and how the market views a brand. In the age of digital transformation, almost everything can be measured. In the coming year, this data – properly handled - will be a cornerstone of how businesses operate. Every important decision can and should be supported by its application and analytics. Science and research is currently being transformed by the new possibilities big data brings. In Canada, JT have SIM cards in heart-rate monitors that stream patient data back to their GP, who can monitor what is happening to their patient's blood pressure and other vital statistics, virtually and in real time.

You can only think of the potential when all the individual data from smart watches and wearable devices can be used to apply it to millions of people and their various ailments. The clinical trials of the future won't be limited by small sample sizes but could potentially include everyone. This has the possibility to transform health services globally.





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Virtual Reality

We attended a number of tech fairs and conferences this year, the piece of technology that saw the most engagement was virtual reality headsets but we have just scratched the surface in terms of VR innovation. Previously, it was technology that was reserved for tech enthusiasts and extreme gamers; however, we are now starting to see its mainstream application with the likes of Pokemon GO, Sony headsets and most recently, Snapchat glasses. By combining hardware innovation and next generation software experiences, some of these larger enterprises are amplifying human social experiences. But it's not just big gaming and social media-based businesses that see its potential. Soon, companies like Airbnb will allow users to 'tour' a hotel and surrounding areas before embarking on their journey. Customer reviews are somewhat reliable but VR presents an opportunity to really see for yourself.

Smart phone technology is also driving the development of VR. High resolution screens and accurate sensors which operate under low power were missing from the original VR hardware. The explosion of the smart phone market has accelerated development and lowered prices in exactly the right areas for VR hardware designers to capitalise on. By housing your smart phone in a cardboard shell, as launched by Google, you can get a surprisingly effective virtual experience, making it affordable to everyone.

As VR becomes more common in the business and consumer sphere, cheaper equipment is becoming available, providing an opportunity for organisations to adopt the technology at a wider scale, globally.

3D Printing

3D printing isn't new but the real opportunity now isn't the hardware, it's the intellectual property being created. Plans for all manner of products, parts, and supplies will become available for download. Tailored suits based on 3D body scans or even a 3D-printed homes are real possibilities. Did you know that Dubai plans to 3D print 25% of its new buildings by 2030? If – as many predict – a 3D printer will be as common as a fridge or cooker, the real business winners could be the designers who stand to earn royalties for each download, in the same way the IP owners of songs and movies do.



Cyber Security

While technology could hold the key to enhanced customer relationships and business growth, it can also leave businesses and individuals vulnerable to security breaches. Earlier this year, there was a spike in 'phishing attacks' - fraudulent email messages appearing to come from legitimate sources. The digital security industry is trying hard to keep ahead of the digital criminals and with the IoT, it also means security takes on a whole new range of end points.

Cyber security is being recognised as one of the greatest risks to business, with the global annual cost of cybercrime estimated at \$445 billion, according to the World Economic Forum's 2016 Global Risks Report. The UK government are taking the threat of 'cyber warfare' seriously and have recently announced plans to invest £1.9 billion through 'defence, deterrence and development' in cybercrime enforcement capability nationally.

Industries need to share best practice and have a joined up approach to protection and mitigating risks.





Automation

Most companies are already leveraging the cloud to help reduce the complexity of their back-end systems, and a growing number have embraced the cloud as a strategic enabler for their digital business. But internet-connected device proliferation combined with big data analytics means that businesses can automate and refine their operations.

Whether it is robotic automation of decision making (the insurance industry is using software robots to make automated decisions around claims by leveraging cognitive analytics), the automation of security systems to guard against and respond to the increasing number of security threats, or the numerous automation services in the banking sector.

Financial experts are now predicting that automated banks are in the not too distant future. According to a recent study by Citigroup, automated banking could replace 30% of bank jobs over the next decade. Financial advisers and analysts could be replaced by robo-advisers, that have the data needed to make split-second and informed decisions. The payments and mobile banking industries are also riding high: fintech start-ups raised over \$22.3 billion in funding in 2015, up 75% from 2014. This trend will no doubt speed up in 2017. Expect to hear 'automation' a lot in 2017.

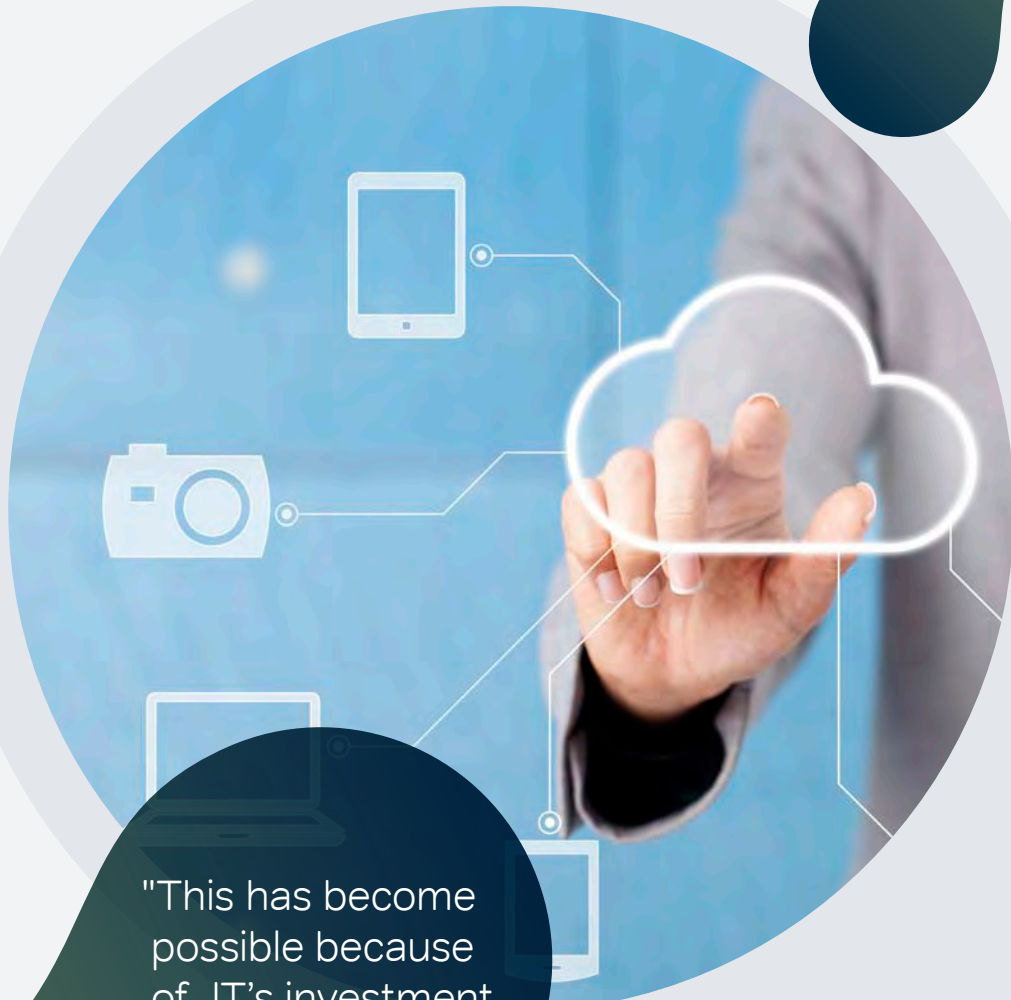
Network Convergence

The volume of data traffic has now exceeded voice traffic, and businesses are increasingly looking to data networks to handle voice, video, telepresence and other sophisticated applications such as virtual white boards.

The days of POTS (Plain Old Telephone Service) are numbered and in the highly competitive world of commerce, businesses need a high performance network today, that's built for tomorrow.

Integrating voice services and data into a single network, known as network convergence, expands the possibilities for communication while opening the way for advanced applications that enable a more agile and productive organisation. Businesses need to support a growing array of critical applications, ranging from backup and continuity, cloud computing, and distributed workers, to name just a few.

JT has recently launched a Cloud PBX system which removes the need for any telephony hardware in offices except the handsets on desks (if that's needed at all). This has become possible because of JT's investment in fibre, which will eventually replace the copper lines that have served the Channel Islands community so well for decades. The same can be said for the UK and most other global regions. Expect more business applications to be elevated to the cloud in 2017.



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Video Conferencing

For decades, video conferencing has been a nice-to-have feature for most businesses, but not a necessity. Thanks to advances in both hardware and software - as well as the growing demand for visual communications among millennials in the workforce - that's all about to change.

As businesses are becoming internationally mobile, the demand to stay in touch when and wherever we are is increasing. With the significant developments in video equipment, a day's meeting can now be held seamlessly over real-time video, both from the office and remotely; saving businesses time and money.

Travel is and will remain a vital part of connectivity for businesses who are working across multi-locations. However transport delays, if they happen, can be costly and time-consuming. The huge advancements in video conferencing means businesses can now take control of improving communication and relationships by enabling people to meet 'face-to-face', wherever they are located without travel downtime.

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