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**The 7 Biggest Technology Trends In 2020 Everyone Must Get Ready For Now**

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**AI-as-a-service**

Artificial Intelligence (AI) is one of the most transformative tech evolutions of our times. As I highlighted in my book 'Artificial Intelligence in Practice', most companies have started to explore how they can use AI to improve the customer experience and to streamline their business operations. This will continue in 2020, and while people will increasingly become used to working alongside AIs, designing and deploying our own AI-based systems will remain an expensive proposition for most businesses.

For this reason, much of the AI applications will continue to be done through providers of as-a-service platforms, which allow us to simply feed in our own data and pay for the algorithms or compute resources as we use them.

Currently, these platforms, provided by the likes of Amazon, Google, and Microsoft, tend to be somewhat broad in scope, with (often expensive) custom-engineering required to apply them to the specific tasks an organization may require. During 2020, we will see wider adoption and a growing pool of providers that are likely to start offering more tailored applications and services for specific or specialized tasks. This will mean no company will have any excuses left not to use AI.

Today In: [Innovation](https://www.forbes.com/enterprise-cloud)

**5G data networks**

The 5th generation of mobile internet connectivity is going to give us super-fast download and upload speeds as well as more stable connections. While 5G mobile data networks became available for the first time in 2019, they were mostly still expensive and limited to functioning in confined areas or major cities. 2020 is likely to be the year when 5G really starts to fly, with more affordable data plans as well as greatly improved coverage, meaning that everyone can join in the fun.

**A Rural Revolution: How The 5G Era Will Bring Opportunity And Growth To Small-Town America**

Super-fast data networks will not only give us the ability to stream movies and music at higher quality when we’re on the move. The greatly increased speeds mean that mobile networks will become more usable even than the wired networks running into our homes and businesses. Companies must consider the business implications of having super-fast and stable internet access anywhere. The increased bandwidth will enable machines, robots, and autonomous vehicles to collect and transfer more data than ever, leading to advances in the area of the [Internet of Things (IoT) and smart machinery](https://www.bernardmarr.com/default.asp?contentID=1576).

**Autonomous Driving**

While we still aren’t at the stage where we can expect to routinely travel in, or even see, autonomous vehicles in 2020, they will undoubtedly continue to generate a significant amount of excitement.

Tesla chief Elon Musk has [said](https://www.wired.com/story/elon-musk-tesla-full-self-driving-2019-2020-promise/) he expects his company to create a truly “complete” autonomous vehicle by this year, and the number of vehicles capable of operating with a lesser degree of autonomy – such as automated braking and lane-changing – will become an increasingly common sight. In addition to this, other in-car systems not directly connected to driving, such as security and entertainment functions – will become increasingly automated and reliant on data capture and analytics. [Google's sister-company Waymo has just completed a trial of autonomous taxis in California, where it transported more than 6200 people in the first month](https://www.google.co.uk/amp/s/techcrunch.com/2019/09/16/waymos-robotaxi-pilot-surpassed-6200-riders-in-its-first-month-in-california/amp/).

It won’t just be cars, of course – trucking and shipping are becoming more autonomous, and breakthroughs in this space are likely to continue to hit the headlines throughout 2020.

With the maturing of autonomous driving technology, we will also increasingly hear about the measures that will be taken by regulators, legislators, and authorities. Changes to laws, existing infrastructure, and social attitudes are all likely to be required before autonomous driving becomes a practical reality for most of us. During 2020, it's likely we will start to see the debate around autonomous driving spread outside of the tech world, as more and more people come round to the idea that the question is not "if," but "when," it will become a reality.

**Personalized and predictive medicine**

Technology is currently transforming healthcare at an unprecedented rate. Our ability to capture data from wearable devices such as smartwatches will give us the ability to increasingly predict and treat health issues in people even before they experience any symptoms.

When it comes to treatment, we will see much more personalized approaches. This is also referred to as precision medicine which allows doctors to more precisely prescribe medicines and apply treatments, thanks to a data-driven understanding of how effective they are likely to be for a specific patient.

Although not a new idea, thanks to recent breakthroughs in technology, especially in the fields of genomics and AI, it is giving us a greater understanding of how different people’s bodies are better or worse equipped to fight off specific diseases, as well as how they are likely to react to different types of medication or treatment.

Throughout 2020 we will see new applications of predictive healthcare and the introduction of more personalized and effective treatments to ensure better outcomes for individual patients.

**Computer Vision**

In computer terms, “vision” involves systems that are able to identify items, places, objects or people from visual images – those collected by a camera or sensor. It’s this technology that allows your smartphone camera to recognize which part of the image it's capturing is a face, and powers technology such as Google Image Search.

As we move through 2020, we’re going to see computer vision equipped tools and technology rolled out for an ever-increasing number of uses. It’s fundamental to the way autonomous cars will “see” and navigate their way around danger. Production lines will employ computer vision cameras to watch for defective products or equipment failures, and security cameras will be able to alert us to anything out of the ordinary, without requiring 24/7 monitoring.

Computer vision is also enabling face recognition, which we will hear a lot about in 2020. We have already seen how useful the technology is in controlling access to our smartphones in the case of Apple's FaceID and how Dubai airport uses it to provide a smoother customer journey. However, as the use cases will grow in 2020, we will also have more debates about limiting the use of this technology because of its potential to erode privacy and enable 'Big Brother'-like state control.

**Extended Reality**

Extended Reality (XR) is a catch-all term that covers several new and emerging technologies being used to create more immersive digital experiences. More specifically, it refers to virtual, augmented, and mixed reality. Virtual reality (VR) provides a fully digitally immersive experience where you enter a computer-generated world using headsets that blend out the real world. Augmented reality (AR) overlays digital objects onto the real world via smartphone screens or displays (think Snapchat filters). Mixed reality (MR) is an extension of AR, that means users can interact with digital objects placed in the real world (think playing a holographic piano that you have placed into your room via an AR headset).

These technologies have been around for a few years now but have largely been confined to the world of entertainment – with Oculus Rift and Vive headsets providing the current state-of-the-art in videogames, and smartphone features such as camera filters and Pokemon Go-style games providing the most visible examples of AR.

From 2020 expect all of that to change, as businesses get to grips with the wealth of exciting possibilities offered by both current forms of XR. Virtual and augmented reality will become increasingly prevalent for training and simulation, as well as offering new ways to interact with customers.

**Blockchain Technology**

Blockchain is a technology trend that I have covered extensively this year, and yet you’re still likely to get blank looks if you mention it in non-tech-savvy company. 2020 could finally be the year when that changes, though. Blockchain is essentially a digital ledger used to record transactions but secured due to its encrypted and decentralized nature. During 2019 some commentators began to argue that the technology was over-hyped and perhaps not as useful as first thought. However, continued investment by the likes of FedEx, IBM, Walmart and Mastercard during 2019 is likely to start to show real-world results, and if they manage to prove its case, could quickly lead to an increase in adoption by smaller players.

And if things are going to plan, 2020 will also see the launch of Facebook's own blockchain-based crypto currently Libra, which is going to create quite a stir.

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Bernard Marr is an internationally best-selling author, popular keynote speaker, futurist, and a strategic business & technology advisor to governments and companies...

**After reading the article above, pick which of the 7 trends you believe shows the most promise and write a half page about why you think this to be true. Turn- In on or before Friday 11/15/19.**