Geared for Growth
Seven tech trends to watch out for in 2021

The technology industry played a vital role in enabling businesses to adapt to the challenges we all experienced during 2020. In doing so, tech sectors such as cloud, collaboration and remote working saw considerable growth. Back in April, for instance, Microsoft CEO Satya Nadella, said his company had "seen two years" worth of digital transformation in two months.

Despite the considerable struggles that remain in the year ahead, the technology industry is likely to see further growth across a range of disciplines and trends during 2021. Here are seven to follow:

1. Data science and analytics

The transformational value of data becomes clear when organisations apply it to drive insight and inform decision making. The problem for many, however, is while they might be working hard to improve their data collection capabilities, making use of it is a different matter. The challenges can be considerable, from identifying the most useful data assets to overcoming the technical issues presented by data which is often dotted around multiple legacy systems.

The growing application of data analytics and data science can help correlate, combine, and create trends in easy to view dashboards. This enables organisations to make more informed decisions and understand how their business is performing across every KPI.

Implemented effectively, it can have a major impact on business efficiency and competitiveness, and we expect to see all industries look to improve on the way they handle data in 2021.
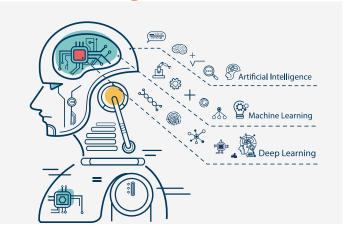
2. Automation

Automation can be achieved through various different avenues ranging from API integrations, Robotic Process Automation 'RPA' to improvements in workflows and business rules. For instance, it offers a proven, compelling method for menial tasks that can then free workers to focus on more strategic, creative and higher value work. Automation has already built considerable momentum, but we expect to see big pushes from law and utility companies after successful implementations within the finance and health sectors.

3. Artificial Intelligence and Machine Learning

AI often appears on trends lists and this year is no different. For instance, the use of Image analysis, natural language processing, and OCR readers are starting to add real value to business by saving time and improving prediction performance.

A subset of AI, Machine Learning is now a huge driving force in enabling systems to make better decisions and learn from expanding datasets and growing experience. As a result, AI will continue its growth across a diverse range of industries including healthcare, insurance and transport.

4. Chatbots and Virtual Assistants

Chatbots have grown in sophistication and effectiveness, using natural language understanding to become significantly more authentic. Implementing chatbots and virtual assistants as a first line of support enables organisations to involve a human only when necessary, creating cost benefits and improving quality of service. We expect to see the continuation of this technology within finance, retail, and ecommerce, but what we'll also increasingly see this year is the technology becoming more affordable across all business types and sizes.

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5. Hybrid Office Productivity, Security and Compliance

Without the impact of COVID-19, home and hybrid working would have almost certainly remained a niche trend within modern workplace culture. But 2021 is likely to be a big year for hybrid offices, requiring significant emphasis on security, especially among SMEs who are looking beyond last year's frantic rush to move to a remote working environment. For instance, many security strategies will move away from Virtual Private Networks 'VPNs' and remote desktop to more robust and reliable cloud-based architectures capable of delivering quality uptime for workers.
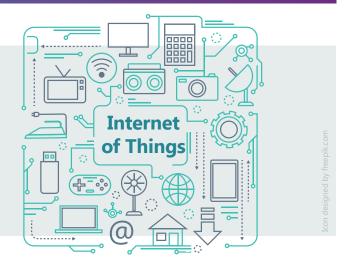
Change is happening wherever you look. The education sector is an example of a sector that is stepping forward with Remote Teaching as opposed to Remote Learning, while public sector procurement 'via the digital marketplace' now places less emphasis on location 'on site' and more on capability, culture, price and remote delivery.

6. IoT and Edge Services

The Internet of Things "IoT" now incorporates billions of connected machines and devices.
With improving security and the rapid expansion of IoT connectivity at the edge of traditional networks and communications infrastructure, it will have another productive year with accelerating adoption across sectors such as utilities and transportation.

Internet of Things

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7. 5G and Enhanced Connectivity

Underpinning the effectiveness of much of this growth is the connectivity speed delivered by fixed and mobile networks. Last year, bandwidth for many home workers was pushed to its limit, with video conferencing performance and download speeds significantly affected. Whilst the arrival of 5G will increase connectivity speeds for some, many others will continue to struggle with inadequate internet performance. As a result, we're likely to see growing demand from home workers for more rapid improvements in connectivity performance.

Similarly, because not all decisions and analysis can be undertaken centrally 'due to data volumes, network performance and risk, for example', edge computing is becoming a vital element for the infrastructure strategy of many organisations, often sitting between IoT and 5G. Think of autonomous vehicles - the decisions made while it is driving need to be carried out at the edge, with only aggregated data sent centrally and updates delivered to the remote vehicle.

This year is certain to be another exciting one for the technology industry, with the prospect of a post-pandemic recovery signalling a return to more predictable patterns of growth. What's increasingly certain is that the trends brought about by the events of 2020 are here to stay, and organisations that have fully embraced these changes will be best placed to succeed in the year ahead.

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