

IoT - How to embrace it and what does it mean?

 By [Ronald Ravel](#)

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The Internet of Things (IoT) is coming, whether you like it or not. According to Gartner, the number of interconnected devices in 2016 will jump 30% to 6.4 billion in common use, and more than double to 13.5 billion by 2020. Organisations today will look to platforms and services that help them manage and analyse the streams of data coming from connected devices.



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Today, we are witnessing an explosion in IoT deployments and solutions and are moving towards a world where almost everything you can imagine will be connected. While this opens the door to many possibilities it also comes with its own challenges such as privacy and security.

The internet has become an integral part of everyday life; it has been a free for all on a daily basis. IoT is a difficult concept for many people to wrap their minds around. Essentially, nearly every business will be affected.

Managing vast quantities of data across increasingly mobile workforces can be tremendously beneficial if done well, but equally can be cumbersome and ineffective if not managed properly. This is why technologies such as mobile edge computing are becoming increasingly popular, helping to increase the prevalence of secure mobile working and data management in the age of IoT.

Unlocking IoT

The evolution of IoT, despite rapid and ongoing technological innovation, is still very much in its fledgeling stages. A recent report from Bain placed over 90% of organisations in the planning phase when it came to the adoption of IoT solutions. Its potential, though, is demonstrated by the fact that by 2020, Bain anticipates a significant shift in uptake, with roughly 80% of adoptions at that point to have progressed to the stage of either 'proof of concept' or extensive implementation.

This means that technological innovation in IoT for the enterprise is progressing at a similarly fast rate with many of these solutions being developed with utilities, engineering, manufacturing and logistics companies in mind.

Processing at the edge

For IoT to be adopted at the rate predicted, technology which does not overwhelm current or even legacy systems must be implemented. Mobile edge computing solves this. Such solutions offer processing power at the edge of the network, helping

firms with a high proportion of mobile workers to reduce operational strain and latency by processing the most critical data at the edge and close to its originating source. Relevant data can then be sent to the cloud for observation and analysis, thereby reducing the waves of 'data garbage' which has to be processed by cloud services.

A logistics manager can feasibly monitor and analyse the efficiency of warehouse operations, for example, with important data calculations carried out in real-time, on location, and key data findings then sent to the cloud for centrally-located data scientists to analyse.

The work of wearables

The potential of IoT means it not only has the scope to change the way people work but also where they work. While widespread mobile working is a relatively new trend in industries such as banking and professional services, for CIOs in sectors where working on the move is inherent – such as logistics and field maintenance – mobility is high on the agenda.

Wearables – and specifically smart glasses – have started to gain traction within the business world. With mobile edge computing solutions acting as the gateway, smart glasses such as Toshiba's assisted reality AR 100 viewer solution have been designed to benefit frontline and field-based workers in industries such as utilities, manufacturing and logistics.

In the renewable energy sector, for example, a wind turbine engineer conducting repairs may use assisted reality smart glasses to call up the schematics of the turbine to enable a hands-free view of service procedures. This means that when a fault becomes a barrier to repair, the engineer is able to use collaboration software to call for assistance from a remote expert and have additional information sent through, thereby saving time and money by eradicating the need for extra personnel to be sent to the site.

The time is ripe for organisations to look to exploit the age of IoT to improve the productivity and safety of their workers, as well as the end service delivered to customers.

In fact, Toshiba's recent 'Maximising Mobility' report found that 49% of organisations believe their sector can benefit from the hands-free functionality of smart glasses, while 47% expect them to deliver improved mobile working and 41% foresee better collaboration and information sharing. Embracing IoT technologies such as mobile edge computing and wearable solutions will be an essential step for many organisations within these verticals as they look to stay on top of 21st century working challenges.

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