The good, the bad, and the ugly of IoT

By Andrew Heuvel

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The Internet of Things (IoT) has stepped out of the realm of possibility and conjecture and into very dynamic real-world applications that are fundamentally changing the future for enterprises and individuals alike.

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The statistics that have followed this technology out of 2018 bear witness to its growth and potential. McKinsey predicts that the IoT market will reach $US581bn by 2020, in ICT spend alone, with a CAGR of 7-15%.

Sensors and devices targeted at specific vertical segments are expected to achieve a CAGR of 24.57% by 2020, reaching a total of 12.86 billion units, according to Statista. It is evident that the transformative power of IoT is exponentially greater than any other technology before it.

IoT is sitting at the edge of the frontier – the wild west of technology where the good, the bad and the ugly divide opinion and capability.

When it comes to the good, IoT has potential that makes it great. It is an opportunity to learn more about our world, to create more data points that allow us deeper insight into factors that affect human life, such as climate change, and information to optimise our future. It has the potential to change the way the agricultural industry uses scarce and shared resources to produce optimal harvests at lower cost points and with reduced waste.

It can be used to digitise the local governments, providing citizens with improved access to services and more efficient delivery of services. Health and commerce sectors can all benefit from having access to data and being able to interpret the data in such a way as to manage systems, skills and people with greater efficiency.

The good of IoT can be found in its ubiquity. SqwidNet, as a national IoT connectivity provider, has unlocked the value of near real-time data points for our customers. We have seen our channel solve the real-world problem on water consumption by using analytics to detect water leaks, inform consumers on municipal water quotes, gamify consumption for water conservation in near real-time. The long range, low cost, low power characteristics of IoT technologies presents a multitude of applications that have endless potential but only if it manages to overcome the bad and the ugly.

Of course, as with any new technology comes the bad. IoT battles with service complexity. There is no one-size-fits-all solution that can adapt to the problem that a company is facing. Instead, there are possibly too many options and increasing implementation complexity.

It may come as a surprise that the 'bad of IoT' is not security but service complexity. The security problems are as a result of the service complexity and SqwidNet is on a journey simplify this to the ABC…D of IoT, that is Application + Backend + Connectivity + Device. In the industrial and enterprise sector, security provided by SqwidNet is not impacted by the security challenges that face the consumer sector.

IoT is as simple as ABC...D!

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In the consumer sector, IoT rears its 'ugly' head with its security nightmares - solutions built on devices and applications that cannot be updated over time and security vulnerabilities that cannot be addressed properly.

SqwidNet is a Sigfox Operator which means that its IoT technologies are based on old military protocols with strong anti-jamming features, a global cloud-based ecosystem and every sensor is embedded with a unique, authenticated, global ID. The base station traffic is transported over an encrypted internet tunnel to the Sigfox cloud and collected via a secure socket service.

Another key issue impacting IoT is the lack of interoperability and standards. Hardware infrastructure players have been developing alternative IoT strategies that contradict some of the software platform provider strategies. This has put solution providers in an awkward position, in cases where they are unable to offer their customers a seamless IoT service experience.

The maturity of standardisation in the ICT sector has set a benchmark of what is expected from the IoT industry. Microsoft Windows has standardised hardware providers, thanks to the sheer volume of adoption it has prescribed the enterprise application domain and the skill level of resources in South Africa. The same can be said for Unix/Linux in the service provider sector and Cisco for enterprise internetworking. As the railroads brought civilisation to the wild west we would expect the development and adoption of standards to simplify IoT as companies are moving from strategy to implementation and putting real money at risk.

Finally, it is important to invest in professional services that understand the value of IoT, the complexities of its layers and application, and that can create an interconnected ecosystem that sidesteps the bad and the ugly and embraces the good. The technology partners that make up the SqwidNet IoT ecosystem are probably your technology partners today. Lean on them to help you make things come alive and drive innovation through IoT.

ABOUT THE AUTHOR

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