

IoT driving traffic, enhancing business value for telco sector

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'Internet of things' (IoT) started as a great marketing buzzword with the promise of business benefits and new services, much like 'cloud'. In fact, the concept of connected edge peripherals has been around for quite some time now, albeit mostly on a private network platform.



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Automated processing of data, access control, remote video monitoring, supervisory control and data acquisition (SCADA), and the like, are all precursors to IoT. The key difference with IoT today is that the data traverses over an internet backbone rather than on a private network or connectivity platform. Another very important observation is that IoT is fast crossing the gap between concepts to practical deployed solutions across different industries.

[According to Gartner](#), there will be approximately 8.4-billion connected things worldwide in 2017, reaching 20.4-billion by 2020. Greater China, Western Europe and North America are the largest drivers of connecting things and are anticipated to represent more than two thirds of the overall IoT user base in 2017. Uptake in Africa is slower. Another interesting observation by Gartner is that the consumer segment is forecast to be the largest user of connected things. IDC anticipate that by 2020, 80% of consumer service interactions will use IoT and big data and analytics to improve service quality, value and timeliness.

Lack of accessible data

It is hard to determine the maturity and pace of IoT uptake across South Africa and the rest of Africa due to a lack of consolidated and accessible data on this. However, local cellular operators have started reporting on their numbers for active connections for connected things. A leading telecom company in South Africa showed that their IoT revenue had grown 19.1% with IoT connections up by 31.6% to 3.0-million devices. Other companies are experiencing significant traction in the connected devices market.

Looking at the “pre-IoT” telematics and other connected device market prevalence, we can say that we’re still in the very early stages of implementing IoT-based services over internet-based backbone networks. Some may attribute the slower uptake to high data charges on existing telco access networks, while others might point to market momentum and slower user adoption. Either way, we are still in the early phases of IoT service evolution and market growth as far as South Africa and the rest of Africa are concerned.

While there are some early movers, many of the traditional telcos and connectivity providers are still developing their services and platform strategy to ensure participation in the evolving IoT market. There is also an interesting challenge that new entrants are facing. Do they target best-of-breed industry-specific solutions and services or build generic IoT connected data lakes that can cater to a myriad of DIY analytics or partner developed use cases? It’s just a matter of time and targeted investment before we catch up and start offering businesses, industries and consumers IoT innovation. As standard connectivity prices continue to drop, one can also expect market entry from other IoT-based service providers leveraging over-the-top delivery models to expand their market reach off their existing cloud-based platforms. Many smart home services are adapting to this delivery model.

The IoT use case in South Africa

IoT has a use case in virtually every sector of business, the data provided by IoT devices – properly collected and analysed – can be leveraged in streamlining service decision making and enhancing customer experience.

Industries where IoT is proving to be quite pervasive in South Africa are:

- **Automotive:** Many luxury vehicles are currently being fitted with telematics and connected systems as a standard feature, with data on driving statistics, habits, location and more being fed into manufacturers’ systems with the purpose of improving car manufacturing and driver experience. Drivers also benefit by receiving news, mails and social feeds while they can also look up nearby locations or get other information at their fingertips through various connected services.
- **Insurance:** All sorts of new information feeds, from healthcare to asset management, can be monitored with connected devices. This enables smart health measuring tools, to asset tracking, to the above-mentioned connected cars giving insurance companies accurate feedback on driving habits. IoT is fast becoming a useful insurance tool to better manage their risk and drive safer behaviour with their customers.
- **Agriculture:** There are multiple use cases for monitoring soil moisture content to managing water distribution more effectively – an ever increasingly vital requirement as drought continues to plague South African farmers.
- **Environmental protection:** With poaching being increasingly problematic, connected devices to monitor and track endangered species, such as rhinos, are being thoroughly explored.
- **Health:** Smart health monitors are able to predict wearer patterns and can even warn of impending health issues, possibly preventing them and going as far as to save lives.
- **Security:** A key concern for nearly all South Africans is getting an impressive upgrade. New monitoring, tracking and preventative security measures are being enabled through IoT, which in turn allows security companies to increase their safety net by providing innovative services that extend now to personal security through smart apps and wearables.

The IoT telco challenge

In order to make IoT services and solutions more accessible and practical in Africa, costs need to come down and there are certain technology considerations such as connectivity that must be overcome. Prohibitive costs take on a number of forms from connectivity through to the cost of connected devices themselves. The technology limitations then enter the mix where for the connected devices, physical connectivity options and battery life are key concerns, while for the back-end IoT data and analytics platform, complexity, integration and efficiency of analysis and decision-making are critical. These various factors must be balanced to ensure overall sustainability, value add and functional fit.

Certain IoT services that are mission critical will also require stable and reliable connectivity. Many telcos will need to invest in resilient and highly available IoT-only networks, or IoT first networks, which gives priority to IoT data, in order to be able to offer mission critical IoT services. Additional requirements, such as ongoing monitoring and maintenance, are also key areas that telcos need to address to offer effective IoT solutions to the market.

The advent and mainstream adoption of open networks and exchanges is slowly driving down the costs of connectivity, data storage and analysis. The growing prevalence of solutions being built on open cloud-based platforms offers the market standardised and easy-to-use alternatives. For those cases that require significant investment and high customisation, or where connected devices' lifecycles can be shared and cycled across multiple users (for example with expensive high care monitoring healthcare devices) the business case for telcos to invest in offering such IoT services is a very real one.

Telcos driving business value of IoT

Telcos are perfectly positioned to offer the platforms that customers need to build their IoT solutions, and have the resources and manpower to provide consumers with customised solutions that will add value and enhance their service delivery. Annuity type revenue streams that IoT as a service offers are also in line with telco-type funding models and investment plans.

Additionally, IoT as an add-on to existing services could be an attractive offering. By offering innovative IoT services, telcos can help customers drive down costs, improve operational efficiencies and enhance delivery service, so that they can add business value to their own customers or bottom line.

Telcos are also able to address the barriers to entry and make IoT accessible to everyone, and not just a handful of large corporations. From mom-and-pop shops, to remote, rural businesses, to large multinationals, telcos have the capability of answering the need with standardised or tailored IoT solutions. The key is having the correct partners on board who understand not just the telco sector, but its challenges and customers to identify the best business opportunities and positive outcome, for them and for their customers.

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