How the IoE will create new, generative business value - and in the most unlikely areas

Advanced sensor technology connected to the so-called 'Internet of Everything' (IoE) is forging unusual business relationships between companies, and generating entirely new forms of value. Mihail Botez, IoT strategic product sales specialist at Cisco and Vishal Barapatre, chief technology officer of In2IT Technologies, reflected on these new opportunities at a recent joint event held in Johannesburg.

Ferli Achirulli via 123RF

Next-generation business advantages

Botez noted that aircraft manufacturers are embedding sensors in the tails of aeroplanes that can pick up sophisticated meteorological data. This information - generated "naturally" while a plane is simply going about its normal businesses of flying passengers around at 40,000 feet - can then be sold to weather services to inform their predictions.

However, the newly-created value stream doesn't stop there. Once the data from the aircraft sensors has been combined with other sources to predict local, short-term weather forecasts, that information can be further on-sold to insurance firms. Knowing that hailstorms are on their way to a certain area can trigger an SMS from the insurer to the relevant customers, suggesting they put their cars undercover, for example.

This kind of value-creation is what economic scientist and writer Umair Haque terms 'next-generation business advantage' - something that is not simply competitive, but "generative" i.e. the creation of new value that does not involve the replacement or destruction of other forms of value.

New streams of value and new business opportunities

According to In2IT Technologies South Africa, technology is the lynchpin in achieving this. Using crowdsourced, sensor-generated information, plugged into the sprawling new web that we refer to as the IoE, companies can share and sell rich information and create unique business relationships that previously would never have been possible. Much of In2IT Technologies's research into the IoE has uncovered new streams of value and new business opportunities for companies in every sector. Barapatre highlighted the importance of partnerships with leading players like Cisco, in realising the promise of the IoE.

Therefore, what is the current state of the IoE? Botez points to the following statistics: there are already 13 billion connected 'things' in the world (including humans), technology is already powering 80% of business processes, and more data has been generated from these connections in the past year, than in the past 5,000 years.

Up to 50 billion connected sensors, devices, machines, and people are expected to comprise the IoE in the year 2020.

In these heady times where we scramble to connect every conceivable type of device, business leaders will look to the IoE to create these new value streams (such as the aircraft-weather service-insurer example), and to power all decision-making. Botez says much of the growth in Big Data and connected devices will stem from a strong desire from business executives to base their judgement on tangible data science. Rather than relying on the old forms of ad hoc information, research, and gut instincts that are extrapolated outward; today one can find concrete statistics that inform every decision.

Evolving consumer and industrial landscapes

For the time being, the two distinct landscapes of 'consumer' and 'industrial' will evolve in parallel, with limited engagement between the two. In the consumer category, the dominant trends involve wearable and tracking devices that measure our health, assess our lifestyles, and improve our productivity. In the industrial category, complex connections are being created between machines, devices, systems and even between companies - that improve efficiency, quality of output, and better respond to market demands.

Vishal Barapatre, In2IT Technologies

Barapatre believes that to capitalise on the magical possibilities in both the consumer and the industrial stages, massive infrastructure investments are required to capture, integrate, share and understand all of this Big Data.

Botez explains that the IoE has unique and extremely intense network design requirements and a complex set of security challenges that need to be addressed before these new forms of 'value' can truly start being extracted on a grand scale.

The shift in thinking, he explains, takes us away from the old models of network silos for different applications, vendor lock-in, master-slave communication systems, and limited connectivity options. In the new, converged world of network design, we will benefit from scalability, traffic optimisation, ruggedisation, flexible form factors, end-to-end portfolio support, validated design, and high levels of security.

Generative business value becoming a business reality

Therefore, the concept of creating 'generative business value' (new business opportunities unlocked within seams that previously didn't exist), may remain a philosophical one for the time being. However, when connected sensors and devices truly take hold over the coming years, this concept will start playing out as business realities and opportunities among firms everywhere in the world.

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