Trends shaping the future of utilities

By Sindy Peters

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Marius Oosthuizen, a lecturer in strategic foresight at the Gordon Institute of Business Science (GIBS), led delegates during the final keynote session of this year's African Utility Week in a scenario planning exercise, unpacking some of the trends shaping the future of utilities.

Marius Oosthuizen, lecturer: strategic foresight (leadership, strategy & ethics) at the Gordon Institute of Business Science (GIBS)

"Scenario planning is a tool that is used to do strategic thinking, to help organisations think about the future either of the organisation, or of the sector in which you operate," explained Oosthuizen. As he explained it, it is a strategic tool that assists an organisation in seeing beyond its "conventional view of the future" and the assumptions of its leaders, in order to allow for a shift in thinking outside its "official future".

The future of energy

"I am of the view, as a forecaster… that the elephant in the room in the energy sector is that the future of the energy utility is not a utility, that in the future - in 20 or 30 years - energy will not be managed inside an organisation that we know as a utility," said Oosthuizen.

He then went on to list a number of trends that support his view and are likely to affect the future of the utilities sector.

Industrie 4.0: Otherwise known as the Fourth Industrial Revolution, the latest phase in human development is driven by connectivity, he explained. This era will entail the development of digital and virtual systems or cybernetic networks that will impact the production, distribution and consumption processes in the energy sector.

Artificial intelligence (AI) and chatbots: The ability of computing technology to learn and make adjustments to itself will change the way utilities think about planning, production, manufacturing and installation, said Oosthuizen, while chatbots will replace humans in CRM, able to multitask and provide real-time updates to customers.

Blockchain: Oosthuizen defines blockchain simply as an online distributed ledger that, in utilities, could be used to control or manage energy consumption, monitoring of meters, and payment and sharing of energy, and because it's distributed, no single individual, entity, or government would be able to control it.

Cloud: In the past, a utility would have to buy the technology and the talent to manage that technology should it want to introduce a new technology-based business approach. "In the future, multiple utilities from different countries will purchase their software and technology capabilities from a server... where you only purchase the use of the technology to the extent that you need it," explained Oosthuizen.

Voice: Interactive voice-activated technologies, similar to the Amazon Echo and Apple's Siri, beyond today's capabilities, will be able to control electricity consumption via household appliances etc.

Bitcoin: Built on blockchain technology, bitcoin is an example of a cryptocurrency, not connected to a government or a reserve bank, which can be exchanged via the internet. Such systems may, in the future, be used to manage the consumption and use of services, said Oosthuizen.

Microchips: Microchips are becoming more and more pervasive within the human-technology interaction space, changing how we interact, explained Oosthuizen, across systems in the public environment.

Intermittent generation: The increasing adoption of independent energy generation technology will have a profound impact on the current systems of energy production, distribution, and consumption.

Internet of Things: The way in which everything is connected via the internet, allowing everyday tools and technologies to share data.

While some of these trends might *seem* way off in the future, Oosthuizen asked delegates to consider the rate of adoption of new technologies: "It took the telephone 110 years to get to a billion users. It took Facebook eight years to get to a billion users. Snapchat is likely to do it in under four years. What happens in the energy space when an organisation like Facebook decides to come out with a little product called Facebook Energy?"

Reducing energy poverty in Africa

Currently 950-million, Africa's population will reach 4.2-billion by 2050, said Oosthuizen. The continent's youth bulge could become a demographic dividend as we benefit from a young working population, or it could become a "demographic nightmare", explained Oosthuizen, if unemployment remains high. In addition to this, apart from the North African region and South Africa, much of the continent experiences low levels of energy access.

"If you do the equation - young, unemployed, largely uneducated population in energy poverty, this represents the biggest challenge, but at the same time, the biggest opportunity of our lifetime," he said.

If a collaborative effort was made in sharing the collective skills, knowledge and technology from the North and South, pushing energy access into the rest of the continent, the rewards could be massive for investors as the population increases, explained Oosthuizen.

He concluded by saying that whatever model we use, reducing energy poverty in Africa should be the mission of any utility into the future.

The 2017 African Utility Week took place at the CTICC in Cape Town, 16-18 May. For more info, go to www.african-utility-week.com.

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