

Smart disruption - the grid of 2018

 By [Vinny Perumal](#)

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The generation of power is set to become the next battleground for disruption as technology and customer demand redefine parameters and expectations.



Vinny Perumal, managing director, Macrocomm

“ The famous revolutionary hall of fame has a new name – technology. It changes regimes, rules and industries. It transforms the traditional, it disrupts the conventional and it redefines the future. ”

It is also making inroads into an industry long cemented in centuries of standard practice; the electricity industry. Big data, nanogrids and microgrids are busy redefining how power is created and delivered and the next few years will see the way people consume and produce power fundamentally change.

The elements that make up the foundations of the energy sector are steadily being eroded by developments in technology. The availability of low-cost and accessible resources has ignited the distributed power generation trend and has seen the large power producers face an uncertain future. How are they to keep up with demand, keep costs at a point that lures the customer, and maintain profit when customers are creating their own solutions?

Investment into smart grids, big data and analytics, renewable resources

The answer lies in investment into smart grids, big data and analytics, renewable resources and the plethora of grid definitions that pepper the landscape.

From the nanogrid that's purported to be the next big thing in energy-aware buildings, to the picogrid that sees the individual embed power into their home infrastructure, to the microgrid that carries the weight of the power generation across buildings and larger infrastructures – power is becoming a commodity that anyone can capture.

Pressure to modernise legacy infrastructure unlikely to lessen

The pressure to modernise legacy infrastructure is unlikely to lessen its grip over the next year. A pressure that is equally evident in South Africa.

Increasing decentralisation in power generation and supply to the grids is placing an enormous burden on existing grids and equipment. As a result, upgrades to legacy systems are essential, especially with communications technology as this will be a key enabler for the future. This technology is fundamental to the success of the internet of things (IoT) and the potential of the smart grid.

The communications infrastructure is a critical driver for the successful operation of the modern smart grid. These technologies ensure its optimal operation and coordination between all smart grid components, from the point of power generation to the end user.

This level of connectivity will also play a key role in that the end user has visibility and transparency so they can manage their bills and consumption more effectively. This visibility also allows for the municipality to effectively manage peak demand and load balancing.

Investment into the refurbishment and expansion of grid assets

There is a global move towards investment into the refurbishment and expansion of grid assets. A move that allows for country and citizen to benefit from lower costs, improved delivery and more efficient consumption and it is being powered by new viable energy mixes and the digital economy.

The sector is undergoing transformation as it works to meet these new demands and keep up with technology advances. These changes are vital in ensuring that the industry is capable of balancing financial stability and service delivery. Especially now that customers are being offered choices to manage their energy uses and costs through energy efficient measures, distributed generation and energy management.

“ The double-edge of the technology sword is not only bringing about change, it is providing the tools needed to benefit from it. ”

The smart meter, the relentless flow of big data and the analytics that can pluck out the nuggets of value – these technologies and tools are set to grow in competency and capability, allowing for the industry to further enhance energy delivery, energy efficiency, revenue collection and customer experiences.

The move towards the smart grid embedded within the smart city will provide customers with improved interaction opportunities, and for the industry to interact more dynamically. It will also allow for integration with other city initiatives such as transport and waste so that government can achieve service delivery goals while reducing costs. The ultimate win-win.

The challenge is to get it right and to do so before legacy infrastructure crumbles under the digital footprint.

ABOUT VINNY PERUMAL

Vinny Perumal is the managing director of Macrocomm. She is a dynamic female entrepreneur who has successfully navigated the complexities of the IT and telecommunications industry for almost two decades.

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