

How IoT can change the face of healthcare

The world's health facilities are straining under the pressure of ageing infrastructure and growing populations, particularly in South Africa. Traditional cost-cutting techniques - such as reducing staff or services - simply do not work in healthcare. Instead, they place patient and employee health and safety at risk.



“The answer is the internet of things (IoT) because its major premise is founded on communication, as the world becomes more connected every day,” explains James Shirley, segment leader healthcare & hospitality, Schneider Electric South Africa.

That connection has taken place in industry and manufacturing and is making ever-increasing inroads into healthcare, through the digitisation of our lives. Electronic health records, digital imaging, telemedicine—all are made possible through highly reliable and available network connectivity.

As a healthcare facility, how will you improve performance, patient safety, and patient satisfaction? It all comes down to bringing the right information, to the right person, at the right time. To do that, all hospital infrastructure systems need to communicate intelligently.

As our world becomes more connected, advanced technology is extending beyond patient care and into the hospital infrastructure itself. IoT is changing the standard of information delivery and decision-making with insight into facility data that can be used to improve operational efficiency, patient satisfaction, and safety for all.

IoT makes cost cutting possible by making facility, asset and energy management easier. Imagine a hospital that delivers better patient outcomes; improved asset use; increased patient-centred care; reduced energy consumption; no operating room downtime; and information that can be used to stay ahead rather than simply keep up. Representing both the frontier and the future of healthcare, IoT brings these advantages to a health facility.

Ageing facilities can benefit too

For new facilities, this infrastructure process needs to take place up front. There should be a plan from the start to make all the infrastructure work together seamlessly. For older facilities, the process involves retro commissioning and determining how to make disparate systems communicate.

One of the key issues in South Africa is ageing facilities that are not equipped with the right infrastructure to support energy and business efficiency. Some can barely keep up with their backlog of maintenance, let alone comply with new stringent sustainability regulations.

IoT technology helps these facilities keep legacy systems, while identifying new opportunities for cost reduction. For example, by using cloud-based, automated building analytics and diagnostics software, hospitals can identify energy savings opportunities and prioritise those with the greatest impact for the least investment. With an asset performance management solution in place, hospitals can expect to reduce maintenance costs by 25-30%, eliminate equipment breakdown by 70-75%, and reduce equipment downtime due to failure by 35-45%.

Managing power outages

Because of the critical nature of hospital power, an IoT-enabled power monitoring system also provides automated testing of the emergency power supply system (EPSS). Such an EPSS test can collect data from and control key assets in the systems - generators and automatic transfer switches (ATS) - and test these assets regularly to confirm their optimal operation and a reliable backup power system for hospitals. This not only increases reliability, due to the accurate monitoring and recording of test parameters, it also greatly reduces the staff burden for such tests.

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