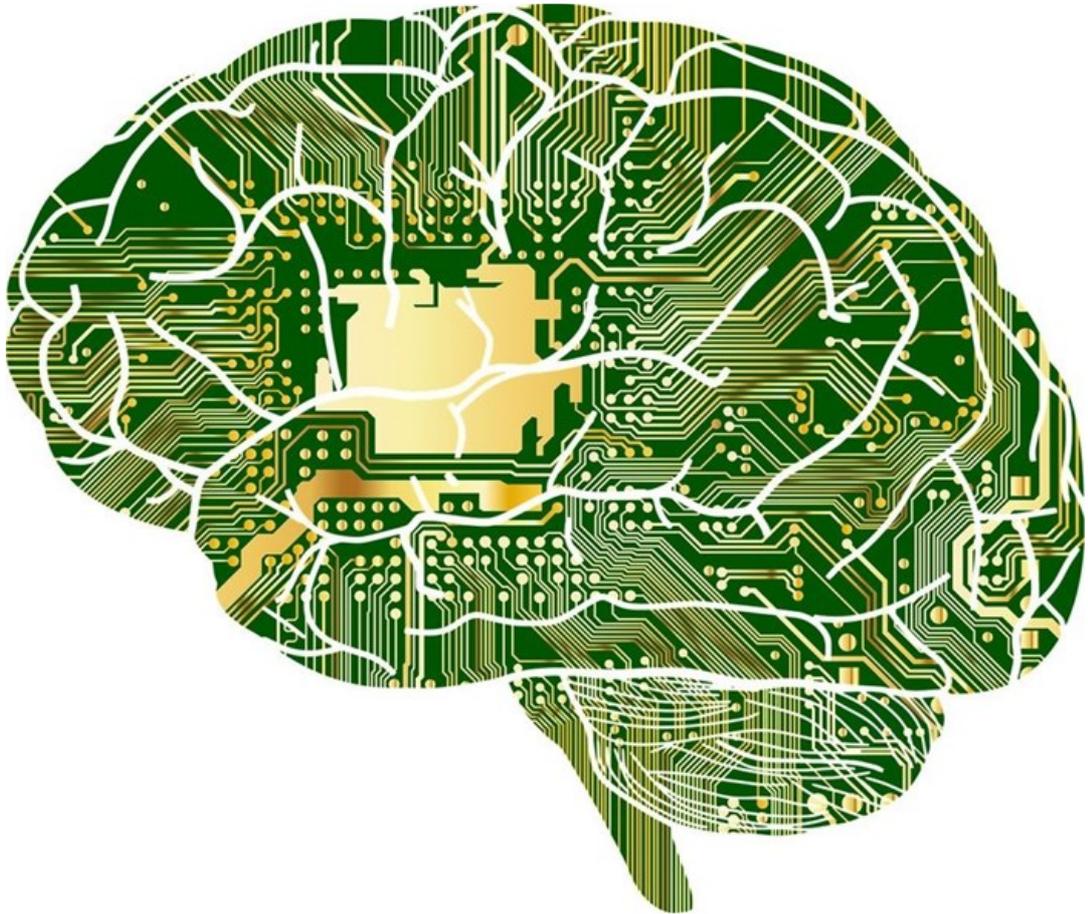


Digital transformation is the key to healthcare in Africa

The benefits of the digital revolution to the healthcare sector in Africa are enormous, yet many angles must be considered if it is to prove successful.



Source: pixabay.com

There are many people around the world who fall through the cracks in the healthcare field. They either lack the resources to see a doctor, or there is simply no doctor for them to see, something that is a common situation in developing areas within rural Africa. It is for this reason digital transformation is viewed as so important – as it offers a host of new opportunities to improve healthcare services across the continent.

According to Laura Swanepoel, head of healthcare, building services, WSP in Africa, “The acceleration of technological innovation has already prompted the development of the next generation of healthcare buildings, which will be very different from those built in the past. This revolution in building design is also being driven by factors such as changing population demographics, shifts in expectations of how healthcare should be provided and environmental considerations.”

Global trends

What the global trends teach us is that when building healthcare facilities, these projects must be viewed more holistically; considering not just design and delivery, but also whether the development is fit-for-purpose today, as well as future-ready based on its geographical location, immediate environment and climate, and the community it will serve.

To answer this, everything from the design of the building envelope, to the use of low embodied carbon building materials, the natural environment and resources, as well as the socio-economic and environmental impact of the building must be given due consideration.

“Moreover, of course, these facilities need to be geared towards utilising the latest technological developments – from Wi-

networks and e-healthcare solutions to more complex technologies like business intelligence (BI) and big data. This is potentially the most important aspect of building new hospitals and clinics. While there is definite scope in Africa for high-tech and high-performance hospitals, it is the remote and rural areas where access to healthcare is severely limited or entirely lacking that can benefit most from facilities that enable e-healthcare,” adds Swanepoel.

Swanepoel further indicates that Africa would benefit most of all from a more decentralised approach to healthcare that delivers services to a larger number of smaller facilities, but which can connect to larger hospitals in the major centres where required, to obtain specialist e-health services.

Clinical connectivity

Such e-health services rely on high-quality connectivity to be effective, and as such Riaan Graham, sales director for Ruckus Networks, sub-Saharan Africa, suggests it should not be forgotten that faster, more reliable Wi-Fi connectivity with the hospital or clinic is critical to improving processes and outcomes relating to patient care.



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“Such Wi-Fi needs to be capable of penetrating a wide range of construction materials, since hospital construction materials, such as poured concrete, metal panels and lead-lined walls severely challenge signal penetration. Furthermore, they must be able to work with diverse medical devices and clinical applications, offer effective security and be easy to implement and maintain for IT staff,” says Graham.

“Dropped calls and clinicians re-authenticating their workstations due to inadequate coverage can result in lost productivity, slower responses and a multitude of other negative outcomes,” indicates Graham. “Therefore, the kind of technology you want to implement here is one that is able to constantly monitor the air and steer Wi-Fi signals around interference in real-time – after all, it is vital to ensure effective connectivity in a sector where the difference between good and bad communications could quite literally be a matter of life and death.”

While effective Wi-Fi solutions see to the current needs of the hospital or clinic, it is also vital for these facilities to invest in realistic solutions that can also assist in managing access and, more importantly, the quality of care.

Clinical insights

According to PBT Group, the sheer volume of available medical data means that BI can be utilised as a tool by a healthcare institution to make smarter and quicker decisions.

Says Yolanda Smit, regional director (Gauteng) at PBT Group, “Having analysed information about a patient readily available provides the opportunity for the healthcare practitioner to access the correct information faster, which can result in correct decisions being made upfront. Such detail can aid the practitioner in turning around a quicker diagnosis and take action if needed. Further to this, making use of advanced analytics in the healthcare space also provides the opportunity for such organisations to analyse or identify risk at the onset of the process, which can assist in helping to detect any fraudulent information, or details that show significant errors. It is about giving the right people access to the right information at the right time, in aid of supporting patient care.”



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Further leveraging the clinical connectivity trends, healthcare service providers in Africa can leverage diagnostic knowledge

bases globally to empower medical staff to stay current with the latest medical research findings. Imagine enabling medical staff in the most remote rural areas to access the latest artificial intelligence services* to improve speed and accuracy of diagnostics, recommend individualised treatments, reduce errors related to human fatigue and more.

Future secure

Riaan Badenhorst, general manager at Kaspersky Lab Africa, however, suggests that if a hospital aims to take advantage of these technologies to reap such benefits, then the facility must ensure that its cybersecurity is nothing less than top-notch.

“Not only are there laws governing the protection of confidential patient information that no hospital wants to fall foul of, but more pertinently, systems today are now inter-connected and mobile devices are used extensively for remote access and data sharing. This digitisation increasingly exposes healthcare organisations to both generic and targeted type cyberattacks,” says Badenhorst.

A true cybersecurity strategy will help to secure both patient and staff data against theft, loss or corruption – where the reputation of a healthcare facility is a non-negligible asset. A cyberattack – regardless of its nature - will damage the credibility of the facility, which is why it is vital to mitigate such risk by implementing advanced security tools and services.



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“Ultimately, in an industry that works with huge amounts of vital data, the transparency and cross-integration of a clinic's IT and its security is critical. Automated security provisioning enables the secure and uncompromised adoption of new technologies that help safeguard its reputation, while the prevention of generic attacks must go hand in hand with developing effective protection, detection and response mechanisms against targeted attacks,” states Badenhorst.

“Digital transformation certainly offers incredible potential benefits for the healthcare sector in Africa, not only enabling it to design better hospitals to improve patient well-being, but also to make full use of current technologies to improve patient care. With this, while the digital evolution is both important and necessary, it is vital that developments to improve facilities are underpinned by the facilities functional requirements, which are facilitated by the technology and not driven by it. This means taking a holistic and well-planned approach to introducing all new systems, to ensure these are fully integrated and aid – rather than impede – delivery of next generation patient care, while maintaining high security standards to protect patients and the healthcare facilities assets,” concludes Swanepoel.

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