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Digital transformation & energy efficiency driving future laboratories

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Digitalization is aiding the new-age players in the healthcare system into sustainable units



The Darwinian postulation on evolution was put to the test and experienced during the devastation wrought by the COVID-19 pandemic. Not only has this pandemic redefined our perception of healthcare, but has also transformed our conception of diagnostics and testing that are imperative to saving lives.

Diagnostics is the first line of defence in the overall wellbeing of a population. It is the key to ascertaining the ailments and determining the course of treatment and medication.

The after-effects of the experiences of the past year or more have transformed the healthcare, pharma and diagnostics industry, steeling them to surmount the challenges coming in their way.

The unexpected loss of power, infrastructural shortcomings and the facilities have been the challenges arising in the future. Operating and maintaining a facility that can stand tall in the face of stress is a complex task which requires strategic interventions, especially in this age of disruption.

Diagnostics and testing have proven themselves to be a pillar of the healthcare industry. The sector has bolstered clinical testing and prevention by leveraging the new-age solutions that enable remote data access, data filtering and analysis in real time with efficiency.

The Indian diagnostics industry is currently valued around $9 billion and is expected to grow at a CAGR of 10% over the next five years. Needless to say, the pandemic was the quintessential spark that spurred the laboratories and healthcare institutions to scale up testing infrastructure.

The need for better equipment and state-of-the-art mechanisms created a ground for further investments which resulted in the massive growth.

The players in the sector used a multi-pronged approach that hinged on preempting, identifying and countering problems by working backwards and in enabling innovations to transform the sector on all fronts.

With upgrades to and the focus on power automation, diagnostic equipment, micro grids, and allied fields, the labs of the future are incubating now. Today, technology is at the heart of everything we do. It connects us to today’s discoveries and practices in the healthcare system.

The transition from manual to the automated diagnoses of diseases is is underway and we are accelerating the shift with analytics and Big Data.

Artificial Intelligence (AI), the Internet of Things (IoT), automation, Blockchain, Machine Learning (ML), and Cloud computing are the drivers of this orbital shift of this field into becoming more intuitive, intelligent and self-reliant.

Digitalization is aiding the new-age players in the healthcare system into sustainable units. Our plans for a better tomorrow start with envisaging efficient and resilient labs today. These smart labs are designed to accelerate decarbonisation and sustainability which will have a significant impact on realizing the global standards in a carbon neutral future.

Our healthcare system is no longer confined to the four walls of a hospital. Making this possible is the highly-automated diagnostics system which ensures the realisation of a digital healthcare ecosystem. Our laboratories need to be technology-driven to ensure better customer experience.

Becoming self-reliant and streamlining the logistics is the need of the hour. We need to strengthen, expand, and enhance the supply chain. With the rising living standards of the Indian population, the load on the healthcare infrastructure will increase. Healthcare facilities need to be more reliable and resilient to withstand this and undertake their operations. The need for a streamlined and efficient power supply is at the root.

With end-to-end connectivity, healthcare facilities should also focus on neutralising cyber-attacks to protect patient data, financial information, and medical devices, among other things. Consistent innovation and upgrade of our diagnostic centers and laboratories will pave the way for a holistic and secure future.

Bhupesh Arora, Business Head, Digital Energy, Schneider Electric India, New Delhi