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Enabling digital transformation to redefine ubiquitous access to quality healthcare

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In conversation with Dirk Dumortier, Head of Business Development Smart-City and Healthcare (Asia Pacific) at Alcatel-Lucent Enterprise (ALE), Singapore



Innovations in the industry are, demonstrably, supporting hospitals and healthcare workers in planning for safer and more efficient use of their resources, while minimising waste. Better still, these systems can even help prevent the spread of viruses in hospitals where frontline workers are at great risk. With the increasing concerns around the Asia Pacific (APAC) region, BioSpectrum Asia spoke to healthcare expert, **Dirk Dumortier, Head of Business Development Smart-City and Healthcare (Asia Pacific), Alcatel-Lucent Enterprise (ALE), Singapore** on prospects and gateways towards progressive healthcare system for Asia-Pacific regions. Edited excerpts;

- **Could you brief South East Asia's healthcare exigency and enduring strategies to build a resilient model?**

The global pandemic has exerted considerable stress on our healthcare system and exposed fundamental challenges that need to be resolved urgently. In countries across Southeast Asia battling a resurgence of the COVID-19 virus spread, hospitals are grappling with a widespread shortage of medical resources and trained staff. Front-liners are faced with the herculean task of delivering patient care while managing administrative tasks.

Meanwhile, we also see countries like Singapore struggling with rising healthcare bills due to increased resource consumption, exacerbated by the pandemic and a rapidly ageing population.
It is crucial that healthcare organisations look immediately into enduring strategies to boost their resilience for the long fight ahead. Healthcare organisations must consider how they can digitalise and adopt technologies to cope with rising costs, better manage resources and create a more efficient and safer environment for patients and staff. Only then, can we prevail in the battle of endurance against the pandemic, as well as be better equipped to weather future crises.

- **What are the common hurdles in introducing technology to the industry, and how can these be overcome?**

The first hurdle to any technology investment decision is usually cost. Decision makers at healthcare organisations may also be concerned with longer-term requirements, such as IT and support teams, maintenance, and upkeep. Decision makers need to realise that for good technology investments, benefits and cost-efficiencies will outweigh cost factors overtime. For example, a smart network set up in a hospital can help optimise operations across many departments, reduce maintenance costs across many pieces of equipment, and eliminate the constant need for IT teams to run performance checks, contributing towards a decline in expenditure. Additionally, strategic use of automation technology can help minimise (and even eliminate) administrative or repetitive tasks, freeing up healthcare workers for more pressing patient care matters.

Another concern for technology adoption is cybersecurity. Technology leaders at healthcare organisations may be worried that adding to the technology mix can weaken their organisations' cybersecurity posture. Take network technology for instance, network vulnerability can cause delay or hinder frontline workers from attending to patients.

Healthcare organisations, unfortunately, have much ground to cover in cybersecurity because they are targeted by threat actors. A report published by Sophos in May 2021 revealed about 1 in 3 (34 per cent) of healthcare organisations globally have experienced a ransomware attack in the past year. It is crucial for healthcare organisations to have in place a strategic cybersecurity plan that manages risks in a manner that meets the demands of today's context. This plan should also include a layered approach to the entire organisation's technology ecosystem, which oversees the four core disciplines of security—identity management, vulnerability management, threat management and trust management. This ensures that no backdoor is left open for malicious intervention.

- **How can a digitalised healthcare system simultaneously reduce cost, while enhancing operational efficiency and improving clinical outcomes?**

A good example of how healthcare organisations can benefit from a digitalised health system is the adoption of Internet of Medical Things (IoMT) technology. IoMT refers to the networking of physical objects and the ability for these devices to collect and transmit information in real-time. It has the potential to transform the healthcare system as we know it now.

IoMT allows for clinics, hospitals, and other healthcare facilities to collect and use data and introduce automation, data analytics and mobility technology into patient care delivery.

The data collected by these devices can be analysed to:

  - Improve patient care: Offer new and enhanced, data-driven care delivery and services
  - Optimise processes: Develop new services and solutions that enhance efficiency and reduce costs
  - Learn about patients' needs: Enable healthcare organisations to offer more personalised care and experiences
  - Make hospital networks smarter: Proactively monitor critical infrastructure and automate the deployment and management of IT assets

Furthermore, IoMT allows for practices like remote patient monitoring. That is, healthcare workers can care for patients remotely allowing patients with less critical conditions to stay in their own homes while getting the medical attention they need. This helps to free up scarce resources at healthcare facilities for those who truly need them.

At ALE, our customers also use IoMT and location-based services to connect and monitor clinical assets – such as patient monitor or infusion pumps – and smart objects. This allows healthcare workers to quickly locate critical equipment, saving them time and enhancing their work efficiency.

On a wider scale, a digitalised healthcare system can also allow for smarter communications across networks, such as the one adopted by Kingsway Hospitals in India. This can enhance communication and collaboration amongst healthcare workers. A smart communications system can make it considerably easier to coordinate resources across departments, and even different clinics and hospitals – enabling the optimal management of resources.

- **How significantly does futureproofing the healthcare system strengthens the healthcare industry's resilience?**

Our healthcare system will only continue to be put to the test. Be it a shortage of resources or rising costs, these are issues that will only persist if we do not seek a long-term way to resolve them. Also, we will never know when the next health crisis may hit us and in what form it will take. The agility and flexibility that digitalisation offers will be of paramount importance to overcome the unpredictability of upcoming challenges.

Innovations in healthcare technologies prepare care providers to deliver a revolutionary connected digital experience to patients and healthcare workers. Digital transformation enables ubiquitous access to quality care for all, simplifying day-to-day operations through connectivity.

Digitalised healthcare allows care providers to:

- Offer patients a better healing experience from welcome to discharge
- Redefine care delivery and simplify daily workflows
- Provide reliable and secure connectivity for patients, clinicians, and devices
- Ensure efficiency, privacy and safety of people, data, assets, and facilities

An ideal, futureproof healthcare system should be able to adapt and cater to the needs of patients while ensuring sustainability and optimum operational efficiency. Forging such a system will therefore be a crucial strategy to prevent compromising patient well-being, while strengthening the healthcare industry's resilience.

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