



SMART HOSPITALS

Tata Communications MOVE™ - Private Network

Industry Overview

Hospitals are actively embarking on digital transformation journey to achieve improved patient treatment, enhanced data security and better operational efficiency. Medical domain actively leverage real time data processing to augment decision. Using technologies such as video surveillance, smart contracts & blockchain, hospitals are ensuring robust safety & security of patients and their medical records.

All these technologies need a robust underlying communication infrastructure to ensure that they deliver on the outcome they promise. With 5G, hospitals can get the required connectivity to meet patient and provider needs at economical cost and at substantial scale. Tata Communications Smart Hospitals solution using 5G private networks provides the required technological and domain expertise to facilitate digital transformation for a hospital conveniently and effectively.

Health Sector - Challenges

- **Underutilised bed capacity** - With Covid 19 increasing number of patients visiting hospitals, hospitals only have a limited amount of beds and assets. It is imperative to utilise the beds capacity optimally to increase revenue.
- **Unreliable staff communication** - Majority of hospitals world-wide are still dependent on pagers for reliable and secure connectivity for mission-critical communication as WiFi and other technologies don't meet the security and reliability expectations.
- **Lack of visibility of patient data** - Majority of hospitals capture patients' data in hard copies/paper files which is limited in nature. These hard copies must be carried by staff everywhere during doctor's visits.
- **Lack of trained doctors/surgeons** - There is a scarcity of trained human resources with advanced surgical expertise in low and middle income countries. Innovative methods are needed to educate and train people at their workplaces using collaborative technologies and networks.
- **Security of patient data** - Hospitals gather confidential medical data of its patients which needs to be kept secure from ransomware attacks originated from internet.

Tata Communications MOVE™ - Private Network

An easy-to-manage, enterprise wireless connectivity solution. It delivers a robust and reliable private wireless network, with an associated digital ecosystem enablement platform to help you to achieve your digital transformation vision.

Value Proposition

- **Automation and orchestration platform** to enable industrial applications
- **Unified view of operations** across global locations
- **Industry vertical knowledge** solving sector specific challenges and needs
- **Collaboration centre** with 5G testbed for use case testing and evaluation
- **Multi-layer security** to protect device, network, and applications
- **Comprehensive service suite** comprising network planning, deployment & management service

Smart Hospitals Use Cases

USE CASE	DESCRIPTION	BENEFITS
Remote Learning	An IoT-based revolutionary technology where remote learning is made possible with the help of AR/VR headgears which send real time, HD video of a live surgery using low latency 5G network. They enable the receiver (medical student or trainee specialist) to get a virtual experience of being in the operation theatre	<ul style="list-style-type: none"> Well-trained surgeons Higher success rate of surgeries Better learning experience
Smart Wards	Smart ward solution comprises IoT enabled wards for - <ul style="list-style-type: none"> Continuous monitoring of ward and patients using video surveillance to identify unusual activity Real time tracking and collection of patient's medical data using e-health devices Bed-side screens to display patient's records and enable remote check-ups 	<ul style="list-style-type: none"> Higher patient turnover Optimal capacity utilisation Less number of incidents Higher Revenue Green operations
Push-to-talk Communication	<ul style="list-style-type: none"> Low latency Push-to-talk communication using reliable 5G network for hospital staff which can be used for mission-critical communication in case of emergencies Directly integrated with staff's phones eliminating the need of pagers used in hospitals 	<ul style="list-style-type: none"> Low emergency response time Reliable connectivity Low hardware cost
Digital Workplace	Office applications running on high bandwidth and low latency 5G connectivity for smooth running of daily hospital operations - <ul style="list-style-type: none"> Edge Cloud Storage for storing comprehensive patient data securely with private network High throughput Edge computing to send HD images like MRI and CT scan to doctors Powerful data analytics to give valuable insights into patient's medical condition 	<ul style="list-style-type: none"> Improved data security Improved staff collaboration 24*7 easy data accessibility

Way forward

Hospitals have to expedite their steps towards digital transformation. In today's era, advanced digital capability is not only a competitive advantage, but a necessity. **Tata Communications Smart Hospitals** solution provides cutting-edge digital transformation solution specifically tailored as per Hospitals operational requirements.

Tata Communications also leverages its vast experience as a global network provider to offer unified view of operations for all network requirements for hospitals.

To collaborate with us or to know more about smart hospitals solution and POCs, please email us at:

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