

Connected Healthcare

ALTEN Calsoft Labs is a pioneer in delivering patient centric, integrated and security compliant health IT solutions, writes **Mr. Somenath Nag**



India has 17 percent of the world's population and the expenditure on our healthcare system and infrastructure is still the lowest among the growing economies. There are inherent challenges of availability, accessibility and affordability when it comes to care delivery. Yet, the Indian healthcare market is poised to grow at a CAGR of 15 percent and is expected to grow steadily in the coming years due to increased life expectancy, growing affordability and awareness and lower mortality rate. Indian healthcare industry is currently estimated at \$60 billion.

In order to address the challenge of delivery of quality

patient care and bridge the divide that exists in Indian healthcare system, Indian healthcare technology solution providers need to embrace new age technologies like cloud, mobility and big data to create sustainable competitive advantage in the marketplace.

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ALTEN Calsoft Labs is a pioneer in delivering patient centric, integrated and security compliant health IT solutions

and has developed a proprietary framework around "Connected Healthcare". The framework provides a platform for leveraging disruptive technologies as major drivers in changing the face of Indian healthcare industry and making India a healthy nation. The framework provides a single platform for health systems modernization, promoting wellness and self-care, physician-patient collaboration, home healthcare and remote monitoring. Benefits of the framework include:

- Provider alerts framework to enable care givers with an update or an adverse event depending on various events configured for a health set up

- Effective patient wellness programs through an integrated glucometer application that monitors blood sugar
- Mobile Nursing Medication chart on tablets and Smartphones for providing more timely care with accuracy
- Remote patient care management that automates the process of monitoring at home, while in transit or at the hospital
- Cloud enabled Radiology Information System with an integrated analytics engine for prognosis and a portal for patients and physicians to view and study the reports
- Cloud-based patient portal as a single source for patients, insurance companies and physicians to collaborate

Calsoft enables leading global healthcare organizations to realize efficient, effective and secure patient centric healthcare informatics solutions. It empowers any enterprise with a clear strategic roadmap and solutions to respond to an ever-changing healthcare ecosystem. With deep industry expertise (20+ years) leveraging its innovations (solution accelerators and frameworks) enable healthcare organizations to successfully address the challenges and seize opportunities by streamlining business processes and workflows, reduce delays in account receivables and improve patient satisfaction, thereby improving revenue and profitability.

The life sciences industry today



is challenged in a big way due to the expiry of patents, managing huge data resulting from biotechnology research activities, thinning product pipelines and strict federal regulations. Calsoft helps bio-tech labs in developing state-of-the-art Laboratory Information and Management Systems (LIMS) to aid them in the research.

- New age business solutions consulting (SMAC- Social Media, Mobility, Analytics and Cloud) and IT advisory services
- Compliance kit for FDA, HIPAA, 21 CFR Part 11, SoX and the ISO standards
- Mobile enablement of various stages of clinical trials and R&D
- Process reengineering and automation
- Data integration and big data analytics comprising R&D Data, clinical trials data, patient data and adverse drugs effect data

Calsoft Labs is a pioneer in addressing the pressing issues faced by the healthcare industry. Its Connected Healthcare framework addresses the following:

- The proprietary healthcare framework makes healthcare accessible, reliable and affordable leveraging mobility, cloud and big data
- Home health and remote monitoring in case of emergency
- Provide patient centric, integrated care solutions leveraging technology to check the

rising healthcare cost

- Make healthcare affordable and spread social welfare awareness, patient education and health tips
- Cloud enabled HIPAA and HITECH Compliant solutions for protecting PHI
- Privacy and security of patient health information

Calsoft is one of the few companies who provide "chip to cloud" solutions for healthcare industry. Calsoft Labs can provide end to end solutions to

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Healthcare Technology Solutions providers in the form of hardware design, contract manufacturing, indigenization, software engineering, and system integration. With its homegrown framework around "Connected Healthcare" leveraging cloud, mobility and big data they provide future proof (from a business and technology perspective) and collaborative solutions that improve quality of care, enhance productivity and

efficiency of care delivery.

ALTEN Calsoft Labs offers a unique collection of best practices in architecting and designing health IT systems, technology and business solutions to help healthcare organizations (providers, payers, technology vendors and life sciences) build and configure interoperable, sustainable solutions. Some of its unique offerings are revolutionizing the care delivery across the care continuum. They include:

- EHR/EMR
- Laboratory Information Management
- Pharmacy Automation & Management
- Radiology Information Systems, PACS/DICOM Solutions
- Interoperability Solutions
- End-to-end Hospital Information Systems
- Connected Healthcare Solutions

Alten Calsoft Labs' Patient Centric mHealth Solutions

ALTEN Calsoft Labs' mHealth solutions, based on its Connected Healthcare Framework, provide the healthcare providers, physicians, and patients an opportunity to collaborate in a meaningful way through the usage of Smartphones, cloud computing, and analytics. Through its 'Connected Device' initiative, which is an integral part of its 'Connected Healthcare Framework', ALTEN

Calsoft Labs is enabling the medical devices to communicate smartly with internet and Smartphones, and hence improving the value they deliver in detection and monitoring of diseases, and preventive care. Following are few mHealth solutions offered by Calsoft labs which are developed using its 'Connected Healthcare Framework':

Personal Blood Sugar Monitoring Solutions (iGlucoCheck)

Calsoft Labs' iGlucoCheck application provides an effective and hassle free means by which patients can monitor their blood-sugar levels periodically anytime, anywhere using their android phones. The application connects to the Glucometer device using Bluetooth, reads the historical data from the device and pushes it to the cloud server.

Some of the prominent features of the application are:

- An in-built simulator that emulates the actual Glucometer device that
- Connects using Bluetooth
- Reads and syncs glucometer data with the cloud server
- Intuitive graphical display of the blood-sugar values over a period of time
- Flagging of blood-sugar levels as low, normal and high

Mobile Enabled Remote Patient Care

Our cross platform (Android, iOS and Windows) based remote care delivery improves patient satisfaction by providing quality care at remote locations. The mobile application enhances productivity and efficiency of physicians with robust practice management features. The application features are:

- Appointments viewing/management, and tracking with a color legend
- Appointment notifications based on the target handset of physician
- In-built map navigation for physicians to locate the patients



quickly in case of emergency

- List of to-do tasks for physicians
- Physician profile that helps in collaborating during care delivery

Nursing Medication Chart

The iOS application enables nurses to view and update the patient vitals, charts and their records on the fly from their iPhone/iPad. The application has the following features that enable the nurses to improve the efficiency, while enhancing the patient care

delivery. The prominent features in the application are:

- Patients list with visited and yet to visit patients tagged
- View patient details and record the vitals pertaining to:
 - Temperature
 - Height & Weight
 - Heart Rate
 - Blood Sugar
 - Blood Pressure
- View the patient history records and history pertaining to the vitals through intuitive graphs

One important aspect of

mHealth that must be remembered is that if mHealth provides more affordable healthcare with better access and quality, consumers are eager to pay for this value. For this reason we have seen many examples of rapid adoption of solutions in emerging markets like India, that have gone wanting in developed markets. The challenge is convincing the consumer and patient that the mHealth solution provides better outcomes, treatment and value than they would typically receive from traditional services. Consumers may consider paying a premium if they were to save time and effort in realising their healthcare objectives.

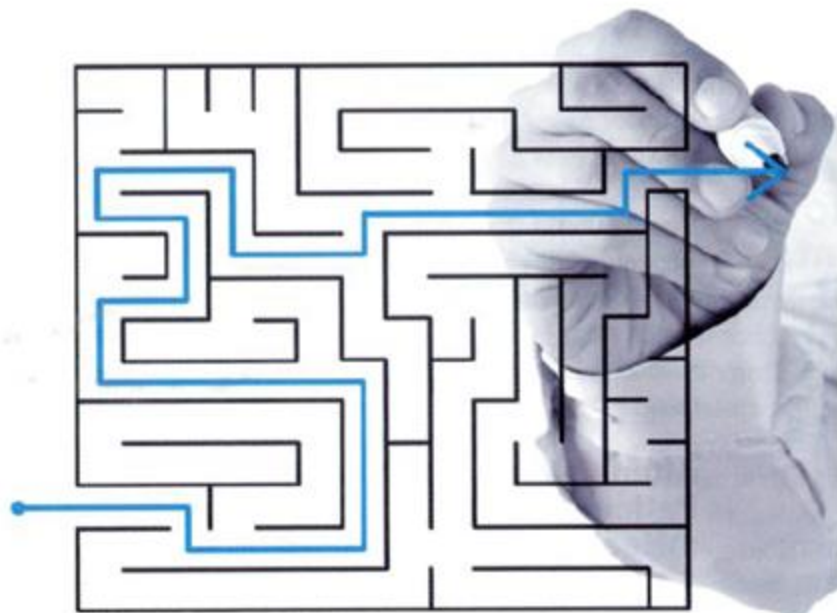
mHealth has the potential to revolutionize the healthcare industry yet organizations are still uncertain how to capitalise on the technology. To make gains, healthcare organisations, payers, mobile operators and regulators

should work together as part of an ecosystem to introduce consumer-centric, scalable business models that empower the patient and provide reimbursement for mHealth offerings.

During past few years, healthcare vertical is one of the fastest growing industry vertical for Calsoft Labs and it has seen multiple new customers, and steady fast paced growth in existing accounts. It is expecting its healthcare practice to grow aggressively in coming years and making required investment in the form of solution building, technology expertise development, and adoption of new technologies to sustain current growth and achieve newer targets. **HE**



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