



Medical Devices Become More Accessible with Internet of Things

Medical device manufacturer engages Cognizant for Internet of Things expertise

A large medical device manufacturer saw an opportunity to transform one of its specialized treatment devices from a hospital-only product into a connected mobile solution, enabling it for use in home therapy.

This new product would offer three main benefits:

- Therapy would be more portable, providing an affordable out-patient option, and thus more accessible.
- Cost per use would be lower for patients, with a reduced quantity of disposables, making a hospital stay optional.
- The client would lay the groundwork for a connected-patient paradigm, enabling real-time monitoring.

The client began development on the new device, but creation of the basic therapy consumed more time than anticipated, cutting into the schedule for building connectivity.

AT A GLANCE

The client, a medical technology development company, needed help in Internet of Things strategy and enablement for its new medical device.

Cognizant's capabilities in systems engineering and IoT strategy have helped the client address bandwidth issues in its product development as well as accelerate the development of necessary components in data storage, connectivity and data input.

Results:

- Cognizant has reduced the client's projected completion date by six to eight months.
- The product will provide numerous benefits when launched, including:
 - Reduced device downtime.
 - Improved patient experience.
 - Clinician productivity.
 - Data analysis for preventive maintenance.

Cognizant had been a long-term partner to the company, and during an exploratory meeting, the client's product development team recognized that Cognizant had the capabilities needed to accelerate product development.

Cognizant's approach caught the client's eye. With a goal to release the new product in major Asian markets in less than two years, the client's leader of product development knew Cognizant's experience in helping manufacturers bring new technologies to market and its ability to augment his team globally could help the manufacturer meet the launch date.

The client engaged Cognizant to enable device connectivity - using a phased Internet of Things (IoT) plan with clearly defined KPI for users, care providers and device makers. Additionally, it sought out Cognizant's capabilities in designing an intuitive and rich user experience around the medical devices to ensure ease of use for end users in operating the device, maintaining it in the field, recording its performance and efficiency, and even tracking equipment rental and servicing.

Cognizant accelerates product development throughout process

After collecting basic requirements on data integration and documentation, it was clear to the Cognizant team that the client needed more than just help with developing the connectivity for the devices, but planning and delivering a connectivity roadmap.

First, data storage had to be addressed. Since the client's engineering team had not yet taken full advantage of its product lifecycle management (PLM) system, which would govern the data for the device, Cognizant provided a PLM administrator to work on-site to manage the system of record.

Second, Cognizant helped to address the end-user experience for using the device. This important element had to be simple so that patients and caregivers could easily operate the device for home therapy, and transmit data from the device. Cognizant's engineering team worked with client teams to rebuild and customize the mobile interface, built on the Android operating system.

With data storage and the input interface completed, Cognizant is now delivering on projects directly tied into connectivity, including deploying RFID for the device's rechargeable components for capturing data into the supply chain system.

The new device is earmarked for initial launch in Asian markets, so Cognizant's team brought in local resources to augment the client's team members in the target markets. The two groups could work side-by-side coordinate on market-specific requirements. This close coordination has been pivotal for throughput acceleration. The client is on track to meet the important product launch dates for the target markets.

Without Cognizant's help, the client forecasted that it would miss the launch date by six to eight months, causing major losses in opportunity cost as competitors were not far behind. The client also benefits by preventing higher costs in overall project delivery overhead caused by an extended timeline.

Cognizant's role in accelerating development of this new product, through IoT strategy, staff augmentation, user experience and technical expertise will ensure that this medical therapy is delivered in a timely and meaningful way, greatly benefiting the client and its patients worldwide.

Learn More

To learn more about Cognizant, visit us at www.cognizant.com/internet-of-things or contact us at internetofthings@cognizant.com.

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