ADVANCED MEDICAL DEVICES SOLUTIONS FOR IMPROVED HEALTHCARE

Wipro helps a global medical device manufacturer with an integrated remote patient monitoring system

INDUSTRY LANDSCAPE

As the evolution of cardiac devices opens up new vistas in the healthcare industry, the demand from emerging markets is increasing, and the key segments that are contributing to this growing demand are Home Care, Monitoring, and Diagnosis. The medical device manufacturers who are competing to capture these opportunities are now forced to roll out advanced device variants quickly. Consequently, the manufacturers are looking towards innovative technology solutions that would address the complex challenges to remain competitive.

This has intensified the pressure on the medical technology providers to reduce time to market, adhere to stringent regulatory compliance and design, and develop first time right devices. Besides the technology, solution providers have become an integral part of the value chain by providing innovation, greater ROI, faster time to market, and end-to-end ownership advantages.

THE OPPORTUNITY

An effective, flexible, and integrated remote patient monitoring system would address the challenges and issues centered around patient care, physician utilization, and clinic productivity. The client's existing device system faces the challenge of scalability and flexibility issues in patient data monitoring, remote follow-ups with physicians, and technology maintenance costs. This resulted in the entry of competition with next-generation patient monitoring systems.

The client was looking for a technology partner who could design, develop, and prototype a next-generation device system that would be robust, agile, and technology independent with telemetry capabilities.

CLIENT BACKGROUND

The client is a US-based leading global medical devices manufacturer and is a Fortune 500 company. Medical professionals from over 120 countries trust the client's medical devices and systems for smart and real-time healthcare solutions to monitor cardiovascular, neuromodulation and diabetes patients.

Wipro partnered with the client to design and develop a robust system, which is technology independent for greater scalability, and helped in cutting back on the tremendous overheads and lowering the overall cost of maintenance.

SOLUTION

The client chose Wipro as its strategic partner to design, develop and prototype a new device system solution that would address challenges with the existing device solution. Qualifying criteria included proven expertise in wireless turnkey device realization, and end-to-end technology solution capabilities. Wipro's technology-rich solution was further enhanced with additional features to ensure the device and services conformed to the highest standards of regulatory compliance, reliability, and scalability.

Wipro provided an end-to-end device system solution that included device ideation to prototype, hardware and software development, and validation and verification. The solution provided innovative architecture, and futuristic frameworks that ensure scalability and extendability to newer technologies.

Also, the solution provided wireless capabilities which could be interfaced over generations of implants, and could be displayed on handheld devices like smart phones & tablets. Besides that, embedded web server support was provided which enabled browser-based access from the physician's side.

Wipro adapted the EagleWision® methodology to evaluate the key steps and processes to implement the solution within stringent timelines and first time pass assurance. Wipro's Analog Design Center of Excellence (CoE) built frameworks, and "Port on Demand" technology helped in realizing the device quickly, and with the highest standards of quality.

The required regulatory pre-compliance testing activities like EMI, EMC, thermal, shock, vibration and humidity were achieved successfully through Wipro's Tarang Lab, and the solution eventually met the required regulatory compliance.

In addition, Wipro's partner ecosystem that comprises third party manufacturers helped the solution in the supply chain and manufacturing related activities.

BUSINESS IMPACT

The client has realized significant benefits from Wipro's next-generation remote patient monitoring solution. The solution helped the client in realizing a low-cost, technology independent device with telemetry capabilities that could work with implanted cardiac devices within stringent targeted timelines.

This technology-independent system solution, with the use of freeware, helped the client in achieving cost savings by eliminating overheads like frequent design and hardware changes, cost of maintenance, etc.

The solution has provided a cost reduction of ~80% for equipment at the physician's end and ~50% for equipment at the patient's end. This solution acted as a key differentiator, and helped the client to retain the market share.

This integrated system solution enabled the client to offer a more efficient, cost effective, scalable and reliable remote patient monitoring solution to the end users.

About Wipro Technologies

Wipro Technologies, the global IT business of Wipro Limited (NYSE: WIT) is a leading Information Technology, Consulting and Outsourcing company, that delivers solutions to enable its clients do business better. Wipro Technologies delivers winning business outcomes through its deep industry experience and a 360 degree view of "Business through Technology" — helping clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, a practitioner's approach to delivering innovation and an organization wide commitment to sustainability, Wipro Technologies has 135,000 employees and clients across 54 countries. For more information, please visit www.wipro.com

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