Building
Tomorrow's Enterprise

Case Study

Infosys®

Designing a Next-Generation Respiratory Care Device

Overview

The client, a leader in respiratory care, was facing declining sales because of its user-unfriendly device software. The client wanted a robust platform which could offer optimal functionalities to all the user groups namely the patients, homecare providers, physicians and the sleep labs. This application needed to be future ready and be compatible with the new respiratory care products that were being planned to be launched, as well as be scalable to adapt to new business needs. Infosys analyzed the client needs, collected feedback from key stakeholders and defined the requirements for the new solution.

For more information, Contact askus@infosys.com

Oct 2008

The Client

The client is a world leader in respiratory care, manufacturing medical devices for the diagnosis and treatment of sleep-disordered breathing.

Business Need

Though the client had the best devices in the market, it was facing stagnating sales and brand switching because their software solution was complex and not very user friendly. Users were opting for competitors' products as their software were more user-friendly and offered features that were better-suited to accomplish day-to-day tasks smoothly and conveniently.

The software of the device is its brain: it manages data for the effective diagnosis, treatment, patient management, consumables replacement and effective insurance claim by health care agencies and physicians.

The client had two software solutions as for this purpose: the first catered to the need for a standalone desktop application and second leveraged the internet and wireless capabilities to provide unattended data monitoring and download solutions.

For both versions, the data management functionality provided was inadequate and hence was increasing the access time for a particular feature. In addition, minimal expandability to support new generation devices meant that the solutions were being used by compulsion rather than by choice. There were multiple indicators to suggest that providing a single solution that could enable users to easily generate the documentation required for insurance and other related activities could improve sales.

Thus the client wanted to build a new data management solution that supports a new generation of products for strategic competence and differentiation. Also, the client had planned the global launch of a new product and wanted the supporting software to be ready in time for the planned release of the device. This meant that the new solution should cater to the various nuances of differing social welfare schemes, which determines the local device acceptance.

Following were the key objectives for defining the new data management solution:

1. Support the new generation of products
2. Address usability challenges of existing solution offerings
3. Address user requirements effectively.
4. Consolidate the capabilities existing in the two current product offerings.

Infosys Approach

The client partnered with Infosys to develop this important, highly visible new software solution based on its extensive experience in similar complex engagements. Infosys' responsibilities included new solution definition, requirement specification, and providing feedback to an independent team looking into usability aspects of the data management solution.

First, Infosys focused on collection of feedback from various stakeholders to understand the limitations of existing software so as to define the blueprint for development of the new software product.

To define the new product, Infosys adopted the following approach:

"As-Is" Product Analysis

The main objective was to develop a basic reference framework for user feedback discussion and to develop the blueprint for a new data management solution.

Activities included documentation of system functionalities and processes supported by existing data management products of the client.

Requirement Elicitation

The main objective was to gather the subtle nuances of the user's environment and their workflows so as to have all the important features captured to design a user-friendly intuitive interface.

Infosys' domain consultants did the following to achieve this objective:

- Stakeholder identification and sampling
- Stakeholders included sleep physicians, sleep lab technicians, payor representatives, home care providers (HCP's), KOL's, accreditation bodies, patients in respective countries, product specialists and sales representatives)
- Gathering high level understanding of workflows of various stakeholders in different geographies
- Preparation of key data points to prepare a questionnaire for the various stakeholders to aid objective evaluation and effective collection of user feedback
- Engage in one-on-one interviews with important stakeholders in key markets/geographies
- Collect feedback, validate workflows, and obtain stakeholder opinions and a wish list for analysis.
- Develop a model for the future of the sleep apnea business, including possible regulatory and business model changes.

Requirement Analysis

The main objective was to analyze data and present findings on the software wish lists, suggestions, change requests and preference for various software features. Analyzing data to provide stakeholder-wise geographic information to better enable Infosys to make recommendations to client on how to prioritize and incorporate features to suit the needs of diverse sets of users around the world.

Requirement Specification and Product Definition

Requirement specification development was the final objective of this engagement. This was to serve as input to user interface specification and solution design.

Requirement specification of the new product was developed based on the data requirements collected during elicitation and the feature documentation of the existing product. The best practices of different regions were put together to ensure a truly global and effective solution was developed.

This included specification of functional features, non-functional product attributes and constraints on deployment of the product.

A detailed methodology was employed to decide on the solution blueprint, taking into consideration the client's needs, expansion plan and the customer feedback.

Best Practices and Frameworks used:

Robust Infosys methodologies, best practices and frameworks were used to collate, collaborate and combine data to develop the requirements.

- Developing targeted stakeholder questionnaire structured to capture key problem areas to guide the interviews.
- Different teams to cover the various geographies (US, Europe and Japan) each consisting a pair of interviewers(Domain and technical consultants) to ensure completeness of feedback
- Interview simulations to refine the process, questionnaire and bring standardization among interviews across various geographies
- Key features were finalized using a quantification model for consensus driven approach
- Structured information input based on recorded interviews for effectiveness and completion.
- Tools to transform qualitative statements for objective measurement and analysis.
- Templates for capturing user wish lists and traceability to requirement specification.

Benefits

Infosys' global presence and strong program execution skills enabled timely completion of the program. Infosys delivered a robust and comprehensive analysis that helped the client to develop the software quickly and launch the new device as per schedule.

Some of the benefits of the approach, tools and techniques employed by Infosys are below:

- Important aspects of business operations were validated for various markets and some new facts were highlighted
- Key insights in to the user's needs- system components designed to address users need for current and future needs
- System design to provide scalability and flexibility to suit clients future growth strategies and new market expansions
- Cross validation model used to validate findings from external stakeholders with clients internal senior management for different markets helped prioritizing the needs of the system
- An insight into the future direction of sleep medicine based on the many meetings with key opinion leaders

Infosys® | Building Tomorrow's Enterprise

For more information, contact askus@infosys.com

About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit www.infosys.com.

© 2011 Infosys Limited, Bangalore, India. Infosys believes the information in this publication is accurate as of its publication date; suchinformation is subject to change without notice. Infosys acknowledges the proprietary rights of the trademarks and product names of other companies mentioned in this document.