LEVERAGING SERVICE ORIENTED ARCHITECTURE FOR COMPETITIVE ADVANTAGE

Abstract

QCSI, a leading provider of healthcare payor solutions, wanted to take their core healthcare payor applications to a next generation architecture to expand on their technology leadership in the healthcare payor market. QCSI also desired the product to be highly interoperable, location-transparent and capable of integrating with other healthcare industry applications. Infosys partnered with QCSI to migrate the existing application, running on a VB-based client server architecture, to a new service-oriented architecture (SOA) based on the Microsoft.Net framework. Infosys was instrumental in implementing all QCSI GUI's to newly designed web based applications. The new browser based applications helped QCSI to improve usability and scale up to service very large customers with fewer terminal servers than previous required. Infosys collaborated with QCSI on the design of the new architecture to enable QCSI's rich functionality to integrate with leading healthcare applications in the Healthcare continuum using service-oriented architecture.

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Client Overview

Widely recognized as an innovator and market leader in creating technology solutions for healthcare payors, Quality Care Solutions, Inc. (QCSI®), offers advanced technology and services to automate the complex process of claims adjudication and settlement. QCSI believes that the most effective solutions are created through a combination of Knowledgeable People, Process Transformation and Product Capability, and is constantly focused on improving its business solutions to help healthcare payors achieve their targeted business outcomes.

Move to Next Generation

QCSI's patented enterprise application solution was running on a Visual Basic (VB)-based tiered architecture. While the com+ architecture served it well, the client wanted to rapidly develop functionality to meet the evolving market place demands for interoperability and service oriented architectures. The client felt that this would facilitate the market's move towards one of its core visions of real time claims processing for large payor organizations.

Challenges

- Limitations in deployment of technology – The client server application was running on a terminal server, which led to larger and larger terminal server farms for organizations that supported hundreds of concurrent users. Thus, it was necessary to develop a web-based application utilizing SOA and web-based services to simplify the deployment process.

- Improve Usability, reduce desktop footprint and maintenance – The 8 year evolution of QCSI's all payor enterprise application functionality resulted in complicated screen layouts, navigation and documentation challenges. This meant greater effort in addressing maintenance aspects than in actual product development.

The Infosys approach

- Infosys partnered with QCSI to migrate the existing application to a new service-oriented architecture (SOA) based on Microsoft.Net, modeled in part after QCSI's then-current portal product aQHealth

- Infosys carried out a review of the desired user experience to understand the usage patterns. This led to the development of the user interface architecture. Infosys and QCSI jointly engineered a user interface architecture that adopted a template-driven development approach, and also standardized the look and feel of the product. The general architecture of the whole system was also validated apart from creating the user interface architecture.

- Infosys designed, developed, tested and delivered 32 modules of QNXT Payor product on the Microsoft .NET platform. SOA principles were applied to develop a loosely coupled, standards based application and enhance the interoperability of the application

- To reduce the time-to-market, Infosys adopted a pyramid approach to development. Infosys identified a minimal set of modules that were mutually exclusive and collectively exhaustive and encapsulated all the complexities in the system. Using this minimal set of modules, Infosys built a proof-of-concept to demonstrate the feasibility of the architecture and then prioritized the development of the remaining modules to meet the client's stringent timelines.
The entire re-architecting process was completed in a record 6 months.

- Infosys also built standard components for navigation, security access, error handling, datagrids, etc. to reduce the time-to-market and lay the platform for shared services.

- Infosys has become one of only 3 "Trusted Strategic Advisors" to QCSI, as a direct result of the technology leadership we demonstrated in the course of the project.

Client Benefits

- Even greater product quality and scalability – This migration significantly improved the extensibility of the product. Going forward, it will enable QCSI to further enhance scalability, deployment and maintenance. This has helped QCSI consolidate its market leadership in the healthcare payor space.

- Lower TCO - Infosys delivered the first-ever comprehensive and structured product documentation. This will simplify the maintenance process and reduce the total cost of ownership of the product significantly.

- Enhanced processes – Infosys' continuing working relationship with QCSI has resulted in significant advancements in their business and IT processes. Infosys' expertise in software engineering has had a positive impact on the product development process at QCSI particularly as it has implemented a more structured design specification prior to development.

- Strategic partnership – In addition to developing the next-generation product, Infosys has forged a strategic partnership with QCSI to provide management services, including implementation and database administration support, for product rollout at end-customer sites. The information sharing on the Infosys and QCSI teams has provided QCSI and Infosys access to an enhanced talent pool that is well-versed in the intricacies of the QCSI's product and the healthcare payor market. Consequently, QCSI has been able to handle higher volumes of business and enable their customers to benefit from fast-track implementation.

Client Testimonials:

"I was impressed with the entire Infosys Team and their commitment to the project. They worked through difficult issues and crafted elegant solutions for several obstacles encountered. I look forward to many more successful cooperative efforts." "Managing a project with dependent deliverables on both sides was challenging. The Infosys team always found ways to continue moving forward on the project and in several instances went beyond the scope of the project to ensure that the schedule was maintained."

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