HEALTHCARE MAJOR ACCELERATES TIME-TO-MARKET BY 9 MONTHS USING SERVICE ORIENTED ARCHITECTURE

Abstract

Faced with a portfolio of incompatible legacy systems that hindered its ability to compete, the client embarked on a multi-year business transformation program to attain market leadership. Infosys partnered with the client to define and implement a SOA framework to accelerate legacy revitalization, leading to a nine-month reduction in time-to-market and savings of US $12 million in the first year.

"This was a collaborative effort by many and continues to establish a track record of delivering business value through complex systems implementation… Your hard work paid off - SG&A savings from the increased AA and the Claim BoR … is now getting populated. Please extend my thanks to your team for their effort!"

Business Sponsor, Revitalization Program

"I would like to extend my congratulations to each of you… You should all be very proud of your accomplishments and the work you have done… Together our partnership has grown and our results are delivering business value to… those constituents that utilize our services everyday. We have dealt with many challenges over the past 15 months, but we are in a position for success."

Co-lead, Revitalization Program

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The Client

The client is a Healthcare major offering health, dental, group, life, disability and long-term care benefits. With over 27 million members for medical, dental, pharmacy and group insurance, the client's network covers over 4,000 hospitals with over 700, 000 healthcare professionals.

Challenges

- In its drive to improve time-to-market, achieve product flexibility, simplify operations and reduce operating costs, the client faced the following challenges:

- The business landscape was changing rapidly, with competitors reducing their time-to-market drastically. The client's IT team took up to a year to implement new products. This posed a serious threat to the client's ability to compete.

- An inflexible architecture resulted in information not being available to users in real-time (the average time for data to flow across systems was three days). This hampered client servicing, leading to a decline in the number of repeat customers, thus impacting revenue.

- Reference information was replicated across units. This led to duplication of data and lack of information synchronization across departments, thus increasing operating cost.

- New regulatory compliance requirements needed to be incorporated into the organization.

- Many of the applications were redundant or based on obsolete technologies, leading to incompatibility across systems. This led to reduced system availability and increased system down-time.

- The core legacy applications were over two decades old. There was a need to harvest business knowledge from the current systems.

The Solution

To overcome these challenges, the client initiated a multi-year program addressing multiple domains to revitalize its legacy systems. The objectives of the program were to

- Improve the integration of systems and processes.

- Improve information availability to support innovation.

- Simplify operations to enable delivery of products with increased speed, flexibility and ease.

- Standardize processes to enable increased automation, thus supporting scale.

- Achieve near 24x7 availability of systems.

Service Oriented Architecture (SOA) was identified as the desired future state architecture.

The Infosys approach

Infosys partnered with the client for a revitalization program focused on the following areas to extract maximum benefit from its existing investments:

Business process optimization: A detailed study of the existing business processes identified redundancies, and opportunities for reducing the operations cycle, improving workflow and infrastructure. Based on the study, the processes were streamlined for superior performance and customer satisfaction.

Following process optimization, an analysis of the application portfolio was undertaken for harvesting business services from legacy applications.

Program Management: The program, spread over 4 years, encompassed multiple vendors, multiple interdependent projects and multiple releases. The complexity of the program was enhanced further due to the aggressive timelines. A strong program management framework was required to ensure that all commitments were met. Infosys set up a Program Management Office (PMO) to manage its projects on an on-going basis. The PMO defined the legacy transformation methodology, processes, guidelines, templates, checklists and tools to be used in the transformation exercise. The PMO undertook weekly meetings with stakeholders to manage the critical path.

Technical Solution: Infosys established a dedicated technology team that worked with the architecture roadmap for the program, coordinated with the client, and ensured architectural consistency across the multiple projects in the program. This team focused on

- Defining standards and guidelines for SOA for use across the organization
- Forecasting CPU usage in terms of MIPS to arrive at a capacity plan for the program
- Harvesting reusable business services and extracting business rules from legacy applications using tools like SEEC Mosaic, based on SOA principles
- Migrating from a hierarchical data-store (IDMS) to an RDBMS (DB2)
- Modernizing monolithic COBOL based legacy applications into an n-tier architecture

The Subject Matter Experts (SMEs) in the team provided domain research and insights to benchmark the system with the best in the world to ensure superior performance.

The team defined and developed an SOA application framework consisting of

- Service contract guidelines
- Integration strategy
- Service registry to support dynamic service binding
- Exception handling framework for SOA
- Instrumentation and monitoring for shared business services.

Delivering the solution: Infosys delivered the projects on-time and ensured successful implementation because of capable program management, a strong focus on quality processes and by adopting the strategy of:

- Multi-release plan
- Multiple large projects running simultaneously with inter-dependencies
- Rapid development with overlapping life-cycle phases within each project
- Multi-vendor participation in the program

13% of the deliverables were delivered ahead of time and 87% on time.

Impact on the business:

- This program enabled the client to reduce time-to-market to three months from approximately a year, thus providing the ability to respond faster to market changes
- The client achieved cumulative savings of USD 12 million in the first year due to the streamlining and automation of the claims adjudication process.
- The savings arose from a 6% improvement in the auto-adjudication rate due to automation.
- Processes were streamlined and the application portfolio rationalized without losing the business knowledge embedded in the existing legacy systems.
- The program resulted in enhanced and seamless collaboration with partners and customers, in realtime due to centralized information access across the organization.

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