Abstract
One of the largest federal long-term care administrators optimizes operations to support its business growth with help from Infosys Public Services.
Long Term Care Partners, LLC® (LTC Partners® or LTCP®) administers more than 280,000 long-term care and 2.4 million dental and vision enrollments annually. LTCP has a strong track record in customer service, online educational and acquisition tools, systems development expertise, and operational efficiency. High service levels with 99 percent uptime requirements and rigorous security compliance that meets Federal Information Security Management Act (FISMA) requirements distinguishes LTCP from its peers in similar industries. LTCP’s goal is to leverage its technology and administrative capabilities to administer other non-federal programs in addition to expanding its existing programs.

Technology limitations drive the need for modernization

LTCP’s CARE system was used for end-to-end administration of Federal Long Term Care Insurance Program (FLTCIP), starting with enrollments and premium processing through claims settlement and underwriting. Built on legacy technology (IBM AS/400 and DB2 as back-end, and PowerBuilder as user interface), CARE faced several limitations.

<table>
<thead>
<tr>
<th>Usability</th>
<th>Manual operations and the absence of multi-processing decreased business users’ efficiency and increased plan administration time</th>
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<tbody>
<tr>
<td>Scalability</td>
<td>Difficulty in scaling the system to support growing volume of transactions. Poor adaptability to support administration of other programs</td>
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<tr>
<td>Security</td>
<td>Lack of security mechanisms to restrict information access within the organization</td>
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<tr>
<td>Interoperability</td>
<td>Lack of integration with ancillary systems for customer support, document management, etc., forced manual import / export of data, impacting operational efficiency</td>
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</table>

These issues went unaddressed due to limited documentation, which made it difficult to update and maintain the system. LTCP realized that it had to modernize the system to ensure delivery of best-in-class services to its members, and achieve its long-term growth objectives. The company debated about upgrading PowerBuilder and if it would provide them with a flexible and interoperable platform to support operations.
Hybrid solution to core systems modernization

Infosys Public Services (Infosys) recommended that LTCP replace its legacy system with a Web-based solution to address the usability, scalability, maintainability, and operational issues, and support business requirements. Infosys combined its knowledge of the core administrative system with expertise in highly scalable, service-oriented technologies to present several alternatives that would address LTCP's challenges and withstand the heavy projected workloads, while delivering the desired performance.

Infosys and LTCP jointly decided on a hybrid approach of modernizing the existing system into a Web-based application, architected using J2EE and .NET. This would leverage some of the existing features that supported good performance such as operating system's memory management, and allow the team to focus on improving usability and maintenance of the new solution.

Infosys assumed end-to-end responsibility – from system appreciation to implementation and testing – to modernize the system. A core team, well-versed with modernization frameworks and strong domain and technical expertise, was formed to execute the program.

Automated system analysis
It was crucial to port all the existing business functionality to the new system to avoid business disruption. Lack of system documentation and limited LTCP subject expert bandwidth were the key constraints in ensuring complete migration. Infosys adopted a tool-based approach to address this challenge. Infosys team utilized an automated tool to analyze PowerBuilder applications and capture existing business rules and functionalities. This helped optimize usage of LTCP expert’s bandwidth and minimize risks and disruptions, while ensuring full coverage.

Scalability to support growth
Service-oriented architecture and Web services were defined to implement the identified business rules and functionality, and facilitate integration with ancillary systems such as customer support for automatic transfer of member information. This made the new system scalable to support expected growth in transactions, and adapt faster to changes in business requirements.

Improved usability for enhanced user efficiency
A number of best-in-class features were incorporated to make the new solution user-friendly and secure. Enhanced automatic search facility to quickly find and export information from different systems, modeless windows to facilitate multi-processing, and hot keys to copy and paste information across different screens improved productivity and efficiency. Role-based access and authorization enhanced security and reduced system administrator's work load by up to 80 percent.

Proven processes for predictable and risk-free execution
The proven Infosys program management framework minimized disruptions, and execution best practices cut down remediation time. The project was executed in four different tracks to ensure continuity of operations and minimize down-time. ‘Piece of Code’ approach strengthened the team’s understanding of challenging requirements such as user interface enhancement, design patterns, multi-window management, and minimized implementation risks and costs.

Pre-built components and frameworks such as Aspect Oriented Programming-based logging, Spring performance monitoring, and JDBC template helped reduce development effort by up to five percent. Other reusable components such as session analyzer and code analyzer, and tools such as Google Speed Tracer and Web Performance Suite™ improved security and performance. The use of innovative testing techniques such as local console testing, in place of remote testing, reduced testing time and effort, while ensuring comprehensive coverage.
Realizing business value

The results of the modernization effort are highly encouraging and echoed by the end users. Key business impact areas include:

- Significant improvement in system usability, and increase in employee productivity of up to 20 percent through user-friendly features and interface
- Reduction in total cost of ownership and maintenance effort of up to 25 percent
- Scalable, secure, and robust solution to support increased volume of transactions
- Adaptable solution to administer other programs and support LTCP’s business growth

“CARE system is core to LTCP’s operations. It was critical to modernize the system to optimize our operations and scale for growth. In Infosys Public Services, we had the right partner to help us make a smooth transition to the new and improved system. Infosys brought together their deep domain expertise, legacy modernization capabilities, benchmark processes, and tools to successfully deliver this strategic initiative.”

– Thom Bernier
Director of IT, Long Term Care Partners

About Long Term Care Partners

Long Term Care Partners, LLC® (LTC Partners® or LTCP®) is a wholly owned subsidiary of John Hancock Life and Health Insurance Company. It administers two of the largest group benefit programs in the United States – the Federal Long Term Care Insurance Program (FLTCIP), a long-term care insurance program offered to eligible Federal family members, and BENEFEDS, a secure website enabling Federal family members to subscribe to and manage their Federal Employees Dental and Vision Insurance Program.

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