

Case Study

Client: United States Department of Agriculture (USDA) Agricultural Marketing Service (AMS)

Billing and Inspection Information System (BIIS)

AMS operates a nationwide service providing inspections on a fee-for-service basis of processed fruits and vegetables for commercial food processors. These concerns sell the inspected commodities for use in the USDA school lunch program, military rations for the U.S. armed services, and sales to the private market. AMS must meet tight inspection schedules to enable these customers to satisfy their shipping contracts and deliver a USDA-certified product to more than 2 million consumers. AMS, being a financially self-supporting agency not funded by Congress, must also meet revenue and profitability targets. This fast-paced business environment requires careful attention to improving the speed and efficiency of inspections, making the costs of inspection services more affordable to its customers, and managing receivables.

AMS faced issues with its core business application that were impeding its ability to improve service levels to its customer base and reduce overall costs. The legacy billing system consisted of standalone, single-user DOS-based PC systems at regional offices with no central databases to support management needs for business intelligence about the operation. Significant aspects of the operation were paper-based and required duplicate data entry and reconciliation between the system and paper files. The system itself was not intuitive and required extensive training to use. The system was also unable to easily accommodate the growing range of services such as food plant audits, sales of inspection aids, and cross utilization of services with other USDA agencies, Federal organizations and states.

The Solution

ILS was called upon to head the effort to streamline the inspection billing processes through reengineering the application and infrastructure to support a more paperless business operation, taking advantage of leading edge technologies. ILS conducted surveys, interviews and JAD sessions to identify business goals, competitive opportunities and challenges, and associated system requirements, both long and short term, for the inspection program. These requirements were reviewed and prioritized in meetings with program executives. ILS then developed a GUI-based application design that captured not only the current legacy system functionality but also provided additional capabilities such as coverage of the full range of inspection services, use of credit cards, and online generation of inspection certificates. ILS then identified and performed a cost benefit analysis of architecture alternatives for hardware, software, and telecommunications. As part of this effort, we worked with the AMS technology group to understand the existing environment and technology standards. ILS then presented the business case for the recommended alternative.

The Results

ILS has been able to quickly gain an understanding of the legacy system, the business processes and new requirements and thoroughly document the information in the requirements document. The client executive sponsor expressed amazement at how quickly the ILS team had grasped the nature and complexities of their business and the potential for breakthrough improvements. ILS translated these findings into a design that not only captured the near term requirements but also provided the scalability to accommodate anticipated long-term improvements. ILS continued this scalability concept in developing the architecture. The new system will be an intranet-based system, furnishing the foundation for the organization to eventually transition to mobile computing using wireless handheld devices at inspection points and to employ web services for billing.

The Technologies

Architectures evaluated:

Client server, n-tier, Distributed interNet Applications (DNA) and Model-View-Controller (MVC), Web services

Software/Programming Languages/Reporting Tools evaluated

Java, Visual Basic, and C++/VC++, JSP/Servlet, ASP/Visual Interdev, Oracle, DB2/2, SQL Server 2000, Weblogic, Iplanet, Apache, Oracle 9i suite, and WebAppServer, Seagate/Crystal Reports, Brio, WebFOCUS, Cognos.

Hardware/OS evaluated:

Dell, Compaq, HP, Sun and IBM, Unix/Linux, Windows NT/Win2k, and Sun Solaris

Networking solutions evaluated

VPN, WAN