

Case Study

TECHSYS is chosen by a student insurance company to create an enrollment and tracking web application

Enrollment Web App

TECHSYS provided a more efficient and more usable application by implementing a process of analysis, usability testing and incremental deployment of application functionality.

Services featured

- Business Analysis
- Application Architecture
- User Interface Design
- Application Design
- Training and Mentoring

Technology

- ASP.Net
- C#.Net
- Web Services
- ADO.Net
- SQL Server
- Report Server

This leading provider of student insurance products and services needed help in creating a student data entry application which handles the complete enrollment for students and automates the loading of student lists from colleges to create insurance coverages. TECHSYS provided analytical, technical, and managerial expertise to define and implement a development process that allowed the company to realize a quick solution through a minimal amount of time, effort, and cost.

The business issue

This insurance provider, one of the nation's largest marketers of student insurance, is a leading provider of insurance products and services geared towards students, from kindergarten to grad school. They input large amounts of policy and enrollment information through antiquated systems that provide no capabilities for monitoring and tracking, and did not interface with existing systems. Thousands of policies are inputted manually during peak seasons through time consuming data entry screens that have not kept up to date with existing technologies, making the implementation of changes time consuming and hard to come by. In addition, the company received paper lists of enrollment information from schools that had to be manually entered. Automation of this process was critical to meeting timelines.

There were three primary goals for implementing a new load system: 1) Increase data entry productivity by designing a system that was simple to use but required minimal training and effort, 2) have the capability to track and analyze the results of the data entry process, and 3) allow for batch loading of lists from schools to reduce the workload of the data entry clerks and managers. Accomplishing these goals was imperative for our client to meet deadlines due to increased volume of applicants while keeping costs low throughout the entire entry and review process, and while managing with the only non-moving target on this project being the delivery date.

Our approach

The first step in the design of the application was to perform analysis on existing

Enrollment Web App

TECHSYS followed an iterative phased approach that allowed for continual feedback regarding the design and implementation in meeting deadlines while allowing for customer involvement and feedback

“We had significant work to complete in a very short time frame and you guys helped significantly with stabilization efforts.” – Leader IT Development Team

applications and interview the application stakeholders. We conducted meetings with managers, team leads, data entry clerks, and existing IT resources. We assisted in finalizing the business rules while at the same time provided guidance on standards and design methodologies. Information gathered from all of the sources was used to guide the design effort. Analysis was performed on current applications for interface points and the capability to reuse objects that were to be created. Prototypes were developed for visual presentation to the users to guide the design.

With constant input from the client team, the project was implemented using an iterative approach. At each stage of the process, feedback was solicited from as wide an audience as possible in an effort to verify that design goals were being addressed properly. An architecture framework was developed to address object oriented methodologies and standards implementation. Objects and stored procedures were created using existing logic where possible to speed the development process. The application was built completely using TECHSYS resources both onsite and offsite.

TECHSYS provided guidance on all options available particularly in areas of significant technical complexity or cost. Each option was evaluated in terms of not only meeting or exceeding requirements but also with regards to ROI and total cost of ownership.

The results

TECHSY successfully developed and implemented a complete turn-key system that greatly enhanced the user’s ability to process and track large volume files of applicant and policy information, while at the same time allowed for easy data entry and modification of that data. A workflow process was implemented to review, correct, and approve of the information being processed through the batch files. Statistics were gathered and reported against to verify the results of the data entry. Reports were developed to assist the users in identifying problem areas, critical bottleneck points, data that needed review and approval by managers, and overall workload metrics. User, functional, and system testing was performed to validate the development effort. In addition, TECHSYS was instrumental in mentoring the existing users and IT staff on the new technologies used and details of the application for a smooth turnover.

The result was an application consisting of many windows, stored procedures, and web services that greatly enhanced the capability of Student Insurance to meet its increase load of information due to an expanse of business.



Case Study

TECHSYS helps simplify effort and increase ROI with new Travel System.

Travel System

Services featured

- Business Analysis
- Product Evaluation
- GAP Analysis
- Database Design
- Application Design
- Application Development
- Testing
- Training and Mentoring

Technology

- Use Case
- J2EE
- EJB
- Websphere
- Websphere Commerce Suite
- JSP
- DB2
- Java
- Javascript

This transportation company, serving thousands of destinations with daily departures and additional partnership services with a number of independent transporters saw the potential to maximize the return on investment (ROI) of its package and sightseeing tours and gain efficiency by automating the process over the company intranet. In stepped TECHSYS, which helped to realize the vision of implementing a network of complementary services with the company's existing schedules and more. Today, the Travel Services unit offers charter and tour packages for businesses, conventions, schools and other groups at competitive rates.

The business issue

This client is a major provider of transportation, serving more than 3,100 destinations with 16,000 daily departures across North America. While the company itself had established package and sightseeing tours for many of its locations, several of the locations the company had purchased over the years had their own isolated booking systems, and some locations had no system at all. The existing systems did not interact with each other and could not be accessed globally by other independent subsidiaries. Over time, the company's package tour and sightseeing operation had become costly and cumbersome, requiring investigation and bookings by phone or by written correspondence.

What the client needed was a modern, efficient system for establishing the package and sightseeing tours – one that could control costs and insure rapid, reliable access to mission-critical information. So TECHSYS assisted in implementing an electronic Travel creation and booking system, which would help minimize the client's cost burden while maximizing the value of its Travel environment. Due to successful and cost beneficial implementations of previous systems, the company looked no further than TECHSYS.

Our approach

The first step in assisting the client in this endeavor was to perform analysis which would provide input to a buy versus build decision. This involved helping to capture and define the business requirements and analyze the

Travel System

TECHSYS delivered a solution that drastically improved the efficiency and effectiveness of defining and booking package and sightseeing tours. Today, the process has been automated and streamlined, and the capability of online bookings via the intranet is a daily reality

“The TECHSYS consultants are always very helpful in providing us what we need” Leader – IT Production Development Team

current business processes associated with existing operations as well as new desired functionality. Use Case diagrams and documents were developed during this stage. Also included in this stage were evaluations of best-of-breed eCommerce systems on the market to determine if any would fit the client's need. WebSphere Commerce Suite (WCS) was eventually chosen. WCS is a Java-based eCommerce application built on the J2EE architecture. We assisted in installation of WebSphere and WCS both at the server and client levels. Next, Gap analysis was performed to identify the extent to which WCS would need to be modified and extended to meet the company's requirements. Many enhancements and modifications were made to WCS, which entailed DB2 database design and development, changing and enhancing the presentation layer through modifications to JSP's, HTML, and JavaScript, extending the business rules by creating new and modifying existing EJB's, and creating test plans to verify the changes. TECHSYS expertise was transferred to the company's employees throughout the project through formalized training classes and one-on-one mentoring.

Now, employees only need a Web browser to access thorough, up-to-date package and sightseeing tour information from anywhere, at any time. Beyond enhanced data availability; the solution provides greater visibility into operations and an arena for greater collaboration throughout the various locations. Additionally, the application enabled the company to simplify operations.

The results

With the Travel System, employees no longer have to physically contact other locations to identify or book package and sightseeing tours. Rather, information is immediately available and inventories are kept up to date. Plus, the information is more content-rich as well, and is multi-cultural to handle several languages and payment in multiple currencies. For the first time, company executives and employees worldwide can participate in cross-location meetings with everyone looking at the same data or report. That success has fueled an expansion of scope as the company now works to distribute the application to all of its locations that handle tour related business.



Case Study

TECHSYS helps medical technology information redesign and reengineer web application

Website Redesign

TECHSYS provided a cleaner, more efficient, and more usable web site design by guiding the customer through a process of analysis, thorough usability testing and incremental deployment of design elements

Services featured

- Business Analysis
- Usability Analysis
- User Interface Design
- Application Design
- Training and Mentoring

Technology

- Photoshop
- Illustrator
- HTML
- Javascript
- ASP.Net
- ADO.net

This leading provider of information on medical technology and informatics needed to redesign and reengineer their web site to make it more appealing, more usable, and more reliable. In addition to providing creative, analytical, and technical expertise, TECHSYS helped define and implement a development process that allowed incrementally deployment of selected components and design aspects. Because of this implementation process, the company was able to reap the benefits of the redesign process with minimal impact on existing systems.

The business issue

This client is a leading provider of information on medical technology and informatics. The company disseminates medical technology data that it has collected from over 300 vendor quotations submitted daily for analysis. It also comes from user satisfaction surveys, interviews, and one-on-one conversations between our Clinical Analysts and the hands-on users of clinical equipment or software applications.

For their customers, the web site is the primary point of access to all of the information in the system. To provide the best value to their customers the client realized that the user interface and navigation patterns of their web site needed to be updated to keep pace with the increasing volume and breadth of data. Customers consistently reported difficulty navigating through the web site and finding the desired information among all of the options. In addition to the site requirements, the client had also made a decision to update the back end systems and to move their development team to the Microsoft ASP.NET platform. This meant that training, mentoring, and architectural guidance were as critical as the site design and development.

What the client needed was a clean and appealing user interface that in addition to being simple and intuitive to navigate, provided the customer with the proper tools to efficiently and consistently find the desired information.

Our approach

The first step in the web site redesign was to perform analysis on the current

Website Redesign

TECHSYS followed an iterative phased approach strategy that allowed for continual feedback regarding the design and simultaneously allowed for very effective project planning for development and implementation in meeting deadlines while allowing for much customer involvement and feedback and to move quickly along the timeline

“We tried to prepare ourselves for the worst with our users in the usability test; we had some minor organizational changes, but the test was an unbelievable success. We even had testers asking to become customers and how to sign up for our services! Great job!” – Leader IT Development Team

site. We not only met and talked to the client’s development team, but to managers, marketers, customer support personnel and end users. Information gathered from all of these sources was used to guide the design effort. With the design goals enumerated, multiple visual prototypes were presented and reviewed in an effort to find the best “look and feel” for the site.

At each stage of the process, feedback was solicited from as wide an audience as possible in an effort to verify that design goals were being addressed properly. As the visual design details were being explored, the issues of usability and navigation were also undergoing analysis and prototyping. Simple “wire frame” web sites and small portions of navigation patterns were developed, reviewed and usability tested to investigate and validate navigation options. The development process also allowed for review and feedback from other professional usability and design experts. This input was welcomed and encouraged by TECHSYS, as it helped to continually improve the site design.

At each step of the analysis and design phase, TECHSYS provided information and guidance on all of the options available to the client, particularly in areas of significant technical complexity or cost. Each option was evaluated in terms of not only meeting or exceeding requirements but also with regards to ROI and total cost of ownership.

The results

The result of the analysis and design process was a final HTML site that consisted of a public home page, a subscriber’s page, and three sample navigation sequences that serve as the model for the entire site. The deliverables included all HTML pages, images, style sheets, and scripting code to support the new design. Because of the modular design approach, the old site was quickly “refurbished” to incorporate many of the newer design elements, providing quick results and broad visibility of the results of the design effort.

As implementation of the new web site began, TECHSYS provided technical mentoring and architectural guidance to the client’s development team; often meeting one on one and in groups with the developers to outline design patterns, implementation details and best practices. Throughout this mentoring process emphasis was placed on assisting the developers understand and evaluate the many implementation options in regard to Microsoft’s stated best practices.



Case Study

TECHSYS reduces check-in and boarding time for major airline

Scheduling System

Services featured

- Business Analysis
- Application Design
- Application Development
- Testing
- Production Implementation
- Mentoring and Training

Technology

- HOW
- Use Case
- Sequence Diagrams
- PowerBuilder
- Sabre SASS
- C++
- OCX

This major airline already had fast check-in times for their passengers, but desired to further increase its efficiency by implementing a system to check-in and receive boarding passes at the curbside drop off areas. TECHSYS expertise allowed that desire to come true.

The business issue

This airline flies more than 90 million passengers a year to over 60 cities across the country, and they do it more than 3,000 times a day. While achieving this level of growth it has also proven its devotion to its employee experience exemplified by its frequent ranking as one of the top five “Best Companies to Work for in America”.

This airline had baggage check-in agents positioned curbside at various airport locations. These agents assisted passengers with checking in baggage before they entered the terminal, to reduce the amount of time passengers would wait in line to receive tickets, thereby speeding up the check-in process. The airline realized these agents could provide additional benefits to passengers if they had the capability to issue boarding passes, provide flight information, and print baggage tags. The system they were currently using to gain flight information was cumbersome and too complicated to use, and did not provide the airlines with the depth of information that they were looking for.

The airline needed a solution that would provide real time access to flight information to better be of service to its customers, all provided with ease of use for its agents. The airline selected TECHSYS to implement the solution based on a proven track record with the client.

Our approach

TECHSYS interviewed the end users of the system to gain insight into their business requirements. Use Cases and Sequence Diagrams were used to capture and record the business requirements and provide a check point for validation that the system was meeting the desired expectations. A working prototype was developed to gain an understanding of graphical user interface

Scheduling System

TECHSYS Business Solutions – *Making Business Systems Work. Together*

requirements. Once the users agreed to the design, the initial system was developed and implemented in six weeks. TECHSYS was also brought in later to assist in the implementation and maintenance of several new features regarding the issuing of boarding passes, and providing flight information.

The system was implemented with a two-tier client server architecture. An interface was built using a C++ OCX which retrieved detail flight information from Sabre's SAAS system. Ease of use was provided by using a touch screen with simple lookup and display of flight information. Security information was also relayed to the agent in order to mark baggage for inspection and direct the passenger to secure inspection points. The system was designed to work with the airport's boarding pass and bag tag printers. Southwest Airlines employees were trained on the technology and system functionality throughout the project by TECHSYS employees.

The results

TECHSY successfully developed and implemented a complete and maintainable system that allowed the airline's customers to gain valuable and time critical information curb side, while at the same time increased the operational efficiency of its baggage check-in agents. This allowed passengers more leeway regarding their check-in options, and greatly enhanced their total flight experience. Initially implemented as a temporary solution until the airline produced a modified check in system, it is still in production 6 years later with almost no downtime.

