

Success case

Latin America's second largest motorcycle assembler develops comprehensive dealer and service shop management system, fully integrating the new platform with its ERP and legacy infrastructure

“We had a very ambitious project in mind and had our doubts it would be possible to implement to our expectations... From the beginning, PSL was frank in expressing the difficulties we might face, but most importantly, was creative in surmounting them. PSL was also critical in helping us organize our priorities and our methods for conceiving the system, leading us with an emphasis on implementation of quick wins, bit by bit.

PSL's deliverables have been consequent with the company's focus on quality, and we are very glad we have made them our business partner for this project.”

Daniel Vasquez A., Team Project Manager

Executive Overview

Our client, Latin America's second largest motorcycle assembler, required a software application that would integrate its distributor and service network around the key areas of order processing, after sales service and customer acquisition and retention. PSL partnered with the client to develop a J2EE web-based platform that optimized dealer and service center interaction in virtually all procurement, after sales and CRM transactions and queries. Utilizing web services, the application was seamlessly integrated with the companies' existing financial ERP platform and a legacy warehousing software that, thanks to the new application, was web-enabled and revitalized. After the software's implementation, the company reduced four-fold its response time to warranty requests, diminished the warranty transaction costs by 70%, and managed to construct and begin to leverage a 400,000+ customer database.

Client Profile

The client is one of the largest motorcycle assemblers in Latin America, with over 500,000 vehicle customers in the region and a network of over 300 dealers, 400 service shops and 800 spare parts outlets. Since 1972, the client has assembled, distributed and serviced vehicles imported from Japan, India and Taiwan.

Business Situation

The client was operating within a strong competitive environment, with mayor challengers from other renowned motorcycle brands, as well as an influx of lower priced Chinese vehicles entering the market. With the competition's products becoming more similar in performance, the client wanted to differentiate its value proposition by establishing best-in-class response times to customer service requests, attaining a better understanding of its customer through data-driven analysis, and establishing a direct communication with its user base via technology.

To meet the client's goals, PSL recommended the adoption of a "software factory" IT service deployment model, displacing a team of consultants and requirement planning specialists to the client's facilities, while handling software architecture, coding and alpha testing in its own premises.

Business Solution

As a first step, the PSL team interacted with the client to deeply understand its business, performing field visits to dealers and service shops, as well as undergoing business process trainings with relevant area managers within the organization. These were deemed crucial; after all, to be able to develop an application that really serves a client, it is first necessary to understand the context within which the systems will operate.

Having acquired a direct knowledge of the business, PSL worked hand in hand with the client team to establish a broad vision for the scope of the project, as well as prioritize the highest value-added goals that needed to be met in the initial iterations of the software. Management metrics that would quantify the impact of the project were also accorded (before – after scenarios), as well as specific efficiency metrics on the project development side (maximum permissible error injection rates, desired error detection rates, coding efficiency in LOCS per hour, etc) .

At this point, the project acquired its normal dynamic, with self contained, functional software artifacts being delivered to the client every 3 to 5 weeks. In a matter of three months the software was delivering value to internal personnel, and in less than seven, the customer's network and clients began to directly benefit from the efficiencies and newly accessible information delivered by the system.

To date, the project team has delivered 70% of the application's scope, including web modules pertaining to warranty claims presentment and follow-up, automation of warranty parts dispatch and tracking, automatic financial settlement of warranty related costs, electronic ordering of products and services, real-time order and supply management linked to manufacturing

schedules, and others. The project, which now ranges over 250,000 lines of code, continues its successful deployment in the dealer order management and customer management fields.

Methodological and technical aspects

To deliver the solution, PSL recommended a mixed approach incorporating RUP and Agile process methodologies. Software requirement planning was segmented into pockets of key functionalities. Special attention was paid in helping the client conceive as much of the solution as possible during requirement planning stages. However, PSL recognized that an important part of the system would be conceived once the client was able to experience test versions of the software “on the screen”. For this reason, flexibility to changing requirements and migrating priorities became part of the project philosophy, and prototype deliverables were frequently presented to the client. As the project evolved, at any point in time the Client-PSL team could be working on different iterations of a different stage of the software lifecycle. Early productivity wins were emphasized and end user involvement during the project was encouraged, which always kept moral and productivity high, despite the extra time commitment required from the client’s lead users, many of whom continued with their everyday responsibilities.

The client was aware of the importance of seamlessly integrating the new platform to other company systems that operated hundreds of thousands of transactions per month and could not be disrupted. PSL incorporated such need within its risk management plan, making special efforts to cooperate with other software vendors and key knowledge-holders within the organization to guarantee a seamless systems integration via web services. Indeed, the new system was able to utilize legacy business rules and expose legacy content and transactions to the web, thus revitalizing a system that still performed its tasks well.

To increase the development speed of the overall solution, PSL deployed its J-Brain (Java Brain) general purpose framework to handle message brokering requests, server queues, work-flows, scheduling, persistence, transaction logs and entitlement and security tasks.

The overall application was developed utilizing Apache Open Source web-server systems with an Oracle database infrastructure.

To date, during the 20 month running project, 84% percent of the deliverables were delivered on-time and 12% percent ahead of schedule, with only 4% delivered behind schedule. Also to date, the software artifacts released to the client present less than 0.4 errors per 1,000 lines of code.

Key Benefits

- Fourth-fold reduction in the average time lapsed from a customer reporting of a warranty problem at a dealer to the resolution of the issue, including warranties that require the physical mailing of spare parts.
- 70% reduction in the transaction cost of a warranty, which will insure the system will repay its own cost (ROI) in less than 14 months.
- Dealers have increased the monies collected for warranty parts and warranty labor expenses by 25%, significantly increasing the cash flow of their service operations.
- Remarkable increase in the speed of detection and correction of new product flaws due to possibility of accessing real time information on product failure, as well as the possibility to data-mine the information for trends and red-flags.