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NEXTREMER SOLUTIONS CASE STUDY

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CASE STUDY

1.1 ABOUT THE CUSTOMER

The client Parker, is a reputed Manufacturing/Processing company based in Japan. A top maker of a wide range of surface treatment chemicals, continued to pursue the development of high value adding products which are used to strengthen iron, aluminum, stainless steel, zinc and steel etc., to improve the quality and performance of coatings and to preserve the appearance, durability and functionality of a diverse range of products such as consumer durables.

Business Problem

used manual paper based approach for Handling there business. They having different plant, having different products processing . So while placing an order it is very difficult to gather the up to date information of product which is processed by other plant.

They having different phases after accepting an order

- 1) Work Progress/ Treatments
- 2) Audit
- 3) Shipping
- 4) Delivery
- 5) Invoice and so on

So they had to maintained all phases on paper which was very tedious and time consuming. But today's development is fast and efficient in matters of time and cost.

The client also faced performance and scalability issues with its current manual approach for Handling there business.

Manual paper based approach was faced with the number of challenges,

The key challenges were:

- The approach involved numerous mathematical calculations.
- The approach did not suitable to running multiple orders Phases.
- Scattered information need to centralize.
- Maintenances of all important paper.

1.2 BUSINESS OPPORTUNITES

With a pro-active and holistic performance engineering approach the twin issues of performance and scalability could be resolved. Some of the other opportunities are:

Partnering with Nextremer for developing a High Performance ERP application , the focus was to improve the performance of the business by more than 100 times by deploying the application to a business environment. The solution was architected to improve the scalability by supporting several hundreds of products as opposed to under a hundred earlier, it would also enable the client to easily introduce and add new products, manage orders efficiently, detail out various processes and treatments involved in the order, ship orders and track shipment and deliveries, maintain audit data and synchronize with the existing ERP system.

Facilitating virtual simulations and research for products involving complex calculations would propel business growth.

1.3 PROJECT SUMMARY

Project scope is delivered in several releases. This is especially important considering the new technology stack which is used for the first time with this project.

Starting with the waterfall development process methodology, whenever it is possible to move the development model towards Agile.

Processes are defined for Fast-tracking activities, mid-term releases, working with outsourced labor and high-level control by PDM & PJM teams.

Project background	
Size of Project	350 man months
Peak team size	Total: 20
Duration	3 years
Location	Offshore

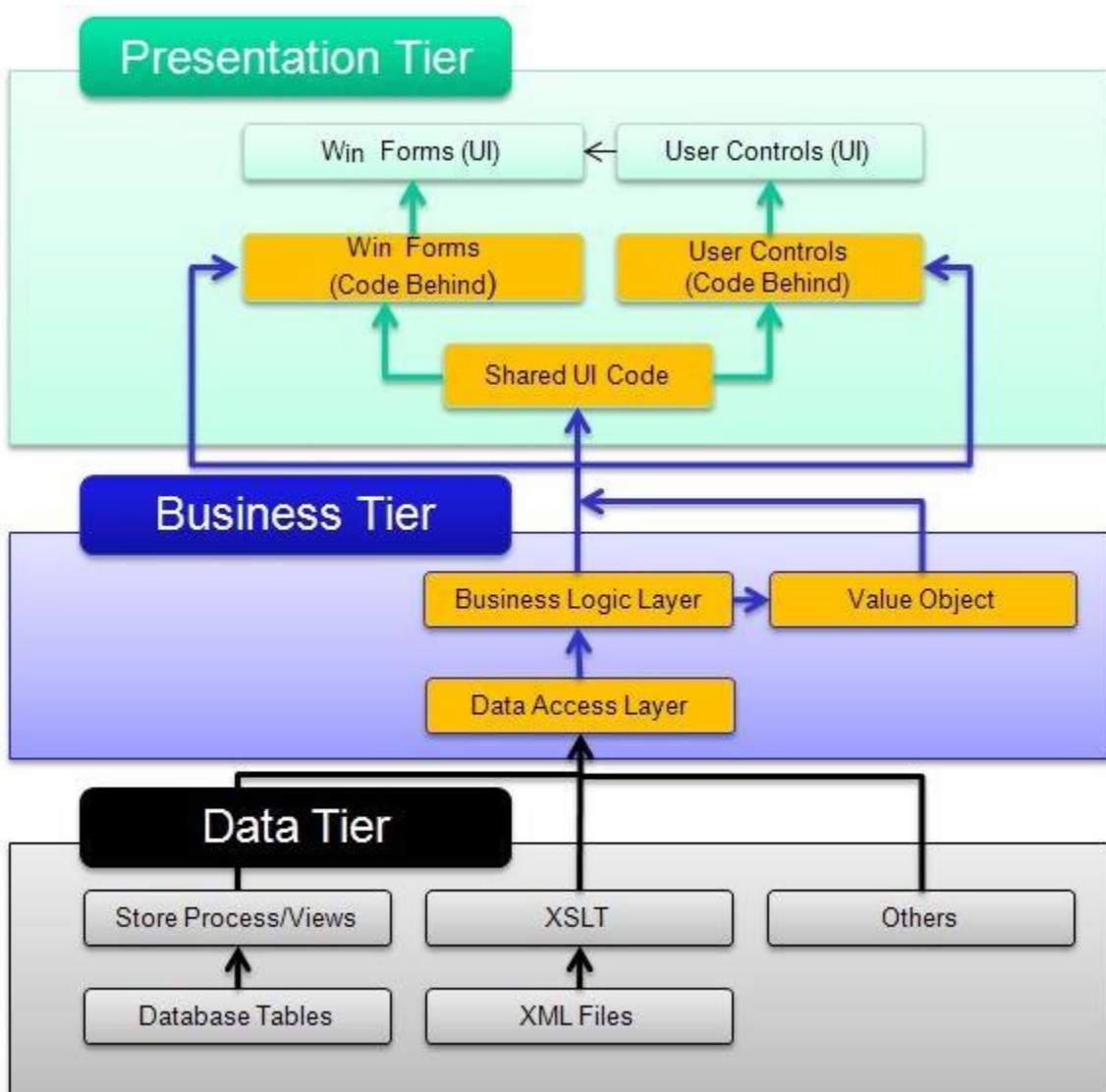
The primary focus of the ERP is:

Scheduling, executing and monitoring the Orders, Shipping the products, quality checks and audits etc. are the primary tasks.

Some of the other functions involved are:

- Order Management System
- Shipping management
- Audit and quality control
- Treatment and processes management
- Item and product management
- Accounting and financial transaction management.
- Reports and analysis for improving efficiency, quality and productivity.

1.4 APPLICATION ARCHITECTURE



Highlights:

- Upward Scalability
- Interfaces for process monitoring.
- Rigorous Quality checks inculcated.
- Modules to search and display the status of production at any given time.
- High performance rendering software and improved flexibility through multi-layered architecture.

The judicious usage of applying the offshore Delivery Model helped the client to stay profitable by cutting development and operational expenditure.

System Architecture in details:

Architecture of Parker ERP.

The system was architected to address performance and scalability issues. As part of the engagement, Nextremer solutions used a pro-active and holistic performance engineering approach to amplify the performance and scalability of the application.

The approach involved:

- Analyzing the current process with the objective of introducing parallelization to address performance issues.
- Evaluating different degrees of parallelization, using centralize data system to determine optimal performance
- Identifying critical sections of the process that could be distributed across a Application.

- **Technology overview**

Technologies utilized	
Technologies	<ul style="list-style-type: none">➤ VB.net➤ Windows XP/7➤ Oracle 11 g➤ Crystal Report
Tools	MSDN, Visual Studio, Toad Data modeler, Toad client.

1.5 CLIENT BENEFITS

- Significant benefits apart from cost reductions where derived some of them are:
- Improved performance allowing parallel processing of complex functionalities, the improvement reduced the response time to less than 5 seconds.
- The time taken to generate reports dropped from several minutes to about 1 minute for under hundred products; reducing the processing time to about 1/200 of the original processing time. This improvement allows the application to process 1000+ products in less than 8 minutes
- Time reduction may allow more simulations and research for those kinds of products involving complex mathematical calculations.
- Migration costs would be reduced as the solution is upward compatible.
- Documentation and knowledge management has been facilitated to address the problem of training new staff and operators.
- Reduction of paper work leads time saving and increases the accuracy in process