



QuServe - An Enterprise Solution for Hospitality Industry

A .NET Framework Solution to Automate Nirula's Manufacturing Facilities

Nirulas is a name synonymous with fast food and rightfully so. As the first chain of quick-service and family dining restaurants in India it was established long before the international fast food appeared on the scene. Currently Nirulas' has 33 food outlets, and more are added to this list continuously. However, with the opening-up of the Indian economy and the boom in the retail sector, indigenous businesses like Nirulas were under pressure to control their costs and improve their margins if they had to compete head-to-head with international chains like McDonalds, Pizza Hut and others.

Nirulas engaged Trisoft Systems to help them build a system that would enable them to optimise their production and procurement processes as these directly affect profitability. Trisoft Systems chose the Microsoft .NET platform to build and deploy the system, known as QuServe.

The Situation

Due to intense competition from international chains like McDonalds, Pizza Hut, Wimpy's etc., Nirulas were under pressure to control their costs and improve their margins, in order to maintain their leadership position. While their retail outlets were automated, their manufacturing operation needed comprehensive automation in order to achieve the optimisation in manufacturing that was required to keep them profitable.

Nirulas were looking for systems that would enable them to optimise their production and procurement costs as these directly affect their margins and therefore their profitability. Raw material costs have been going up and at the same time market pressures, prevent increases in selling prices. They also required the system to reduce wastage, streamline their manufacturing process, improve vendor management, maintain quality and provide better logistics support.

The group consists of two distinct business units (independent companies) - Manufacturing and Restaurants. Currently the manufacturing unit's principal customer is the In-house restaurant chain and limited product sales to two local Restaurants/chains. It is expected that in the near future the sales mix will be 50% internal and 50 % external customers.

As the business grows, so will complexity and Nirulas needed a system that would scale well and be modular in such a way, that as new processes and functionality are added, the system should be able to accommodate these changes by providing structured interfaces to the new modules.

Trisoft Systems' QuServe solution based on the Microsoft .Net platform provides a modular, scalable system that meets Nirulas strategic long-term needs.

Solution Overview

Customer Profile

Industry

Hospitality - Quick
Service Restaurants

Business Situation

Nirula's needed a comprehensive solution to automate their manufacturing operations, including order fulfillment, Production Planning & Scheduling and Vendor Management etc.

Solution

Business Scenario

QuServe - A .NET-based Enterprise Management solution.

Benefits

The solution enables Nirula's chain of fast food restaurants to automate the order fulfillment, Production planning/scheduling, Vendor management and route optimization.

QuServe provides a platform for optimizing of procurement, inventories and operational efficiencies in the production process. Improvements in yields, reduction in wastage and better utilization of resources is contributing to better margins.

The order fulfillment time has been reduced from 48 hours to 24 hours. Improved Distribution logistics through Route and Van Management has reduced delivery costs.

A sophisticated Recipe Management system not only provides a means of monitoring quality it also provides a unique way of

The Solution

Trisoft developed QuServe as a solution to the problems faced by the fast food industry. It helps in improvements and optimisation of the following areas:

- Production Planning
 - Requirement forecasting based on historical data
 - Handling of extra-occasional orders from Internal/External customers
 - Order consolidation and generation of Production charts
- Production Management
 - Batch-wise monitoring of production process based on production charts, plant capacity and Shifts
 - Manpower scheduling
 - Defective product tracking
- Bill-of-materials/Recipe system
 - Convert production charts to Bill-Of-Material and stores requisitions
 - Stores issues materials w/ref to materials received from suppliers
 - Recipe generation based on quantity of items ordered
 - Requisition generation
 - Issue of raw materials with proper reference (product ID)
 - Textual description of recipe preparation (cookbook)
 - Calculation of nutritional values of finished goods based on the raw materials being used and loss of nutritional value over time
- Raw Materials/Product Inventory system
 - Bill-Of-Materials
 - Tracking of goods thru bar coding
- Invoicing
 - Invoicing across the customer base
 - Calculation of various taxes
- Van Scheduling and monitoring
 - Tracking thru mobile phones
 - GIS - mapped system (future)
- Plant & Equipment Maintenance Management
- Indent generation linked to the Purchase system
- Quality/Lab Management Module

With QuServe, the outlets can order online thus drastically reducing order processing time. The managers can monitor various kinds of reports (Productions reports, stock status reports, exception report etc.) of all the production units from a single window. Based on historical data, the production units start their daily production keeping in mind special days (Sundays, Festival, etc) and extra-occasional orders.

The system automatically calculates the raw materials requirement for each production floor based on production of each item's recipe. This raw materials requirement is sent to raw materials store. Items are then issued for production. Batch-wise monitoring of production process is done based on production charts, plant capacity and shifts. Items produced are issued to various restaurants (outlets) based on their online orders.

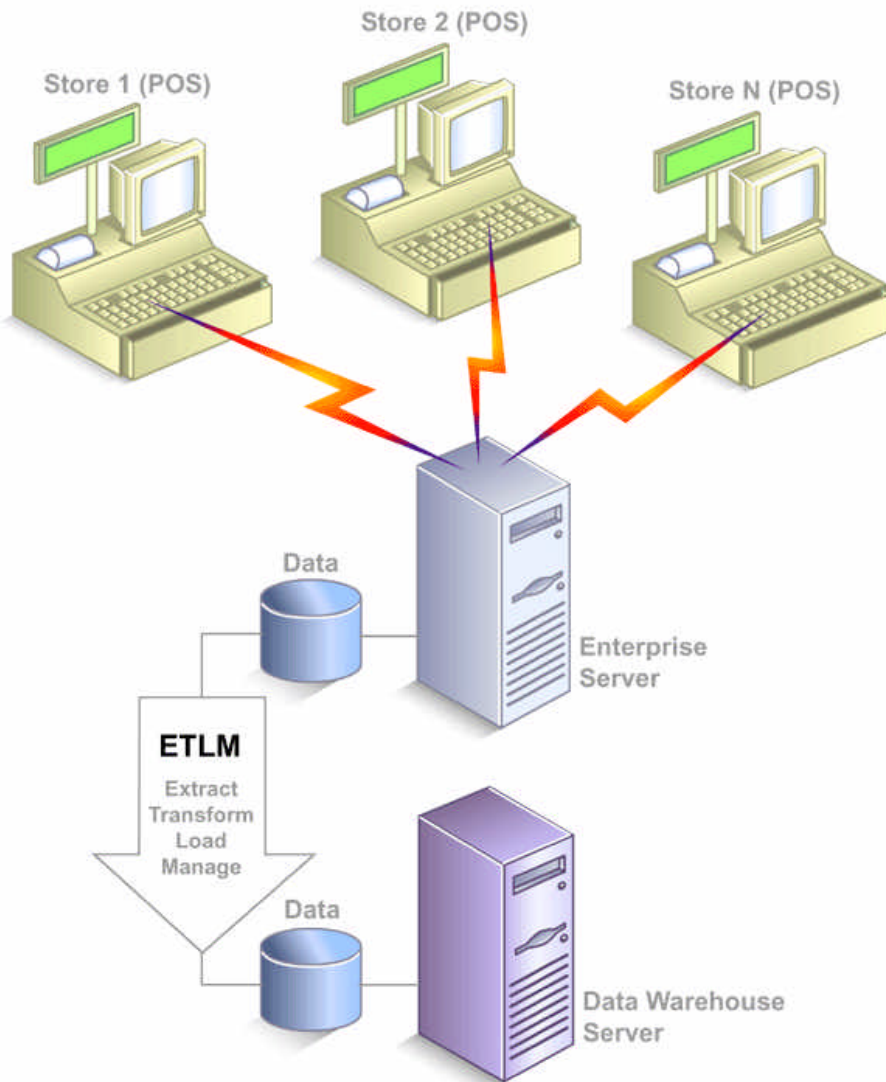
monitoring production costs on a daily basis and thereby providing variance alerts.

Role Based and secure access to documents from anywhere benefits both the process users as well as the management.

Pro-active alerts using gap analysis keeps the users well informed in advance to take necessary actions

Microsoft Products Used

- Microsoft Visual Studio.NET
- SharePoint Portal Server 2001
- Microsoft SQL Server 2000
- Microsoft Exchange Server 2000
- Microsoft Windows® 2000/XP
- Microsoft Office XP



The system generates invoices for the outlets based on orders received from them. Van Scheduling and Monitoring improves their logistics and delivery handling. The system helps the Quality Department to maintain its records more efficiently, monitor and control quality during procurement, production, storage and dispatch. The Maintenance Management system allows the company to efficiently manage essential utilities (engineering items, machinery etc).

Benefits

With QuServe Nirulas has been able to effectively and efficiently manage its processes. It has helped them to reduce their order processing time, reduce wastage, improve production quality, and provide improved cost control and materials management. In the future when all the retail outlets are provided with dedicated communications links, the entire supply chain can transact in real-time, by making effective use of web services that are the foundation of the .Net platform.

The solution is built around Microsoft .Net technology using the modern generation languages of C# and VB.NET. This provides excellent performance, exceptional scalability and modularity and utilizes open standards like XML, UDDI and SOAP.

Future Plans

Trisoft plans to add the following modules in the near future.

1. Finance & Accounts including
 - a. Controlling
 - b. Budgeting
 - c. Costing
 - d. Asset Management
2. Materials Management
3. HR Management
4. Payroll
5. Sales & distribution
6. Asset Management

About .NET

.NET is Microsoft's platform for XML Web services, the next generation of software that connects our world of information, devices and people in a unified, personalized way. The .NET platform enables the creation and use of XML based applications, processes and Web sites as services which share and combine information and functionality with each other by design, on any platform or smart device, to provide tailored solutions for organizations and individuals. For more information please visit: <http://www.microsoft.com/net>

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