

From Legacy to Online Business Intelligence in 90 days



Rallis India Limited, a TATA enterprise, is the largest producer of pesticides and it is one of the largest marketer & distributor of seeds and specialty fertilizers. Rallis has developed a vast distribution network which reaches out to 80% of India's districts and offers its range of products at grassroots level.

Legacy applications written in FoxPro DOS capture sales information at all the depots on a daily basis. However, the information could only flow on a monthly basis to central sites for consolidation and analysis, which meant that the information had little value from a proactive decision making point of view.

The challenge was to make this information available to decision makers on a daily basis without rewriting the legacy applications at remote sites, including delivery of the information in a consolidated manner using auto-generated reports and SMS messages. The deadline was a mere 90 days! Thus the project specs were legacy integration, high performance data processing, business intelligence, and mobility integration.

Project Saraansh, which was designed using Visual Studio.NET, SQL Server 2000, VFP and a BI tool met this challenge within the time constraints. Saraansh is now the benchmark within Rallis for accuracy and timely delivery of actionable information to decision makers. This project is a live example of how a so called 'legacy' application can be rejuvenated to provide great business value, with appropriate and cost effective usage of newer technology.

Situation

Sales information at Rallis India Ltd. was being captured using FoxPro DOS based systems across 40+ locations on a daily basis. However, this information was sent to central locations only once a month. The process of accumulating information from all sites and consolidating it to generate useful reports required additional work at the Head Office (HO). This meant that the analysis of the sales performance for the previous month used to reach the decision makers only around 10th of the next month, by which time the information would merely become a statement of activities done in the past. As a result of this, the information could not be used for arriving at proactive and corrective decisions.

The challenge was to provide a method of gathering data from all remote sites at a much higher frequency – on a daily basis. Gathering information was not sufficient. The information needed to be validated, cleaned, and processed for further reporting.

Mr. Vikas Gadre, Chief Information Officer and a long-standing champion of the Tata Group, articulated the situation in a succinct manner, "The challenge was to provide relevant business information as early as possible; Actionable Information that

Solution Overview

Industry
Agriculture

Customer Profile

Rallis India Ltd. is the leading provider of Agro-chemicals to the Indian market. The company has multiple regional offices, area sales offices, depots, with hundreds of field staff. This large distribution network provides a competitive advantage over emerging MNCs.

Situation

Sales information was being captured in FoxPro DOS applications at remote sites on a daily basis, but reaching HO only once a month. The challenge was to make this information available in a consolidated manner to decision makers on a daily basis without rewriting the legacy applications.

Solution

Vital, Actionable Information was made available to decision makers using automated data upload, consolidation, reporting, business intelligence and SMS messaging using VB.NET and SQL Server 2000.

Benefits

- Reduced dealer outstanding
- Reduced sales-related expenses, such as non-productive travel
- Improved planning and timely management of expectations
- Reduced communication costs

Microsoft Technologies

- Microsoft Windows 2000 Server
- Microsoft SQL Server 2000 Enterprise Edition
- Visual Studio.NET Architect Edition
- Visual FoxPro 7.0
- Business Objects

Partners

Maestros Mediline Systems Limited

could be used to improve business at all levels, such as, inventory management, accounting and sales.”

Baseline connectivity using VSATs and VPN was established recently. However, this connectivity was being utilized only for messaging rather than for business critical information flow.

The longer term plan for Rallis India was to implement process re-engineering and SAP in a phased manner. Therefore, an additional requirement was that the current solution should be in a position to integrate and leverage SAP related information at a later date.

The Solution Design Goals

Project Saraansh: Empower Employees, Enhance Productivity with Actionable Information derived from existing legacy applications.

Mr. Vikas Gadre, in an unusual and unique approach, articulated to the Rallis Management and team of over 2000 employees, his intent - “I will, design and deploy a system within 90 days that integrates with existing legacy applications, uses available data in a more effective manner, disseminates actionable information in a timely manner, with a minimum IT investment and leads to reduction of expenses, better control over outstandings and reduction in inventory by at least 5%.”

The word *Saraansh*, when translated, means brief, precise, synopsis of information; the essential; the essence derived from a larger pool of detailed information. *Saraansh* became the name to launch this ambitious project where critical, near real-time updates on actionable information related to sales; inventory and accounts began to be messaged to key people on their mobile phones.

The objective said Mr. Gadre was “to simulate a newspaper-office environment, where the entire pipeline of information and dataflow, from the base data entry to the instant the information is executed upon, is crunched into a 24 hour time-frame. Additionally, the information must be such that can be carried anywhere, read at anytime, like a newspaper.” Performance, scalability, and reliability were essential, and time to market was critical.

From a data management and analysis perspective, it was critical to turn raw data into business intelligence and take full advantage of the opportunities presented by the Web. Critical information cannot wait for someone to come to the office and open a report; it must be actively forwarded to the relevant persons using SMS.

Another design goal was to ensure that all personnel within the sales hierarchy, from the head of sales to the field sales executives, get enriched information using Saraansh. If you ensure that all stakeholders benefit from an application, the adoption cycle is shortened drastically. Moreover, further requests for additional features also originate from all levels, leading to a more mature product in a shorter timeframe.

Solution Architecture and Implementation

Mr. Gadre’s vision of providing Actionable Information that would enable users across the hierarchy to derive and promote quantifiable business benefits was shared with **Dr. Nitin Paranjape, CMD, Maestros Mediline Systems Ltd**, Microsoft India’s enterprise solutions partner.

“I will, design and deploy a system within 90 days that integrates with existing legacy applications, uses available data in a more effective manner, disseminates actionable information in a timely manner, with a minimum IT investment and leads to reduction of expenses, better control over outstandings and reduction in inventory by at least 5%.”

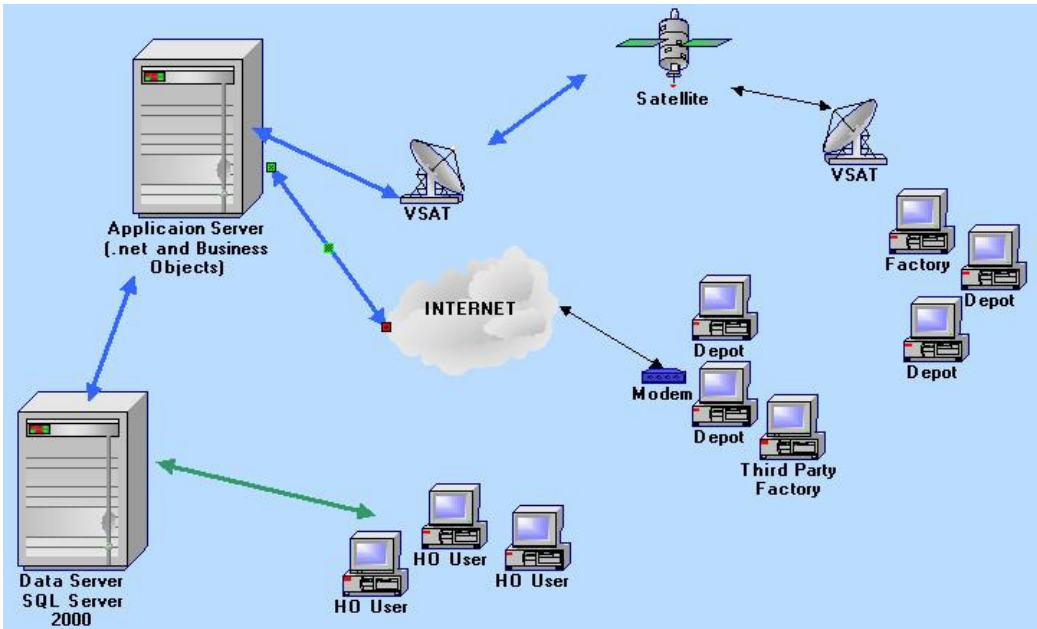
Mr. Vikas Gadre

Chief Information Officer
Rallis India Pvt. Ltd.

The Rallis team demonstrated great commitment, hard work, focus and determination to make this management vision a ground-reality. They instituted the core-project team with champions from the Operations environment, which was led by Mr. Ramanan, who has extensive experience of working in diverse domain specific roles within Rallis and also has extensive, hands-on IT expertise.

The Maestros team consisted of six members - a Project Manager and Team Lead, two Business Intelligence specialists, two .NET and SQL Server 2000 specialists and one Visual FoxPro specialist.

The architecture is illustrated in the diagram below:



The main components which made up this system are:

Saraansh Component	Description
Data Download Application	Written in VB6, this application was installed at all remote sites. This tool downloads legacy data in a pre-defined format on a daily basis and uploads it to the central site using email (as attachment). Upload is done using dedicated VSATs or VPN.
Data Cleansing and Upload Component	Every day, huge amount of data would be sent from all locations. This component required to extract data from all attachments, parse it, clean it and upload it to SQL 2000 Server for further processing and reporting. Very high performance in hard-core data handling was required here. This component was written in Visual FoxPro 7.0 and was integrated with the core application written in VB.NET.
Consolidation and Aggregation	Once data is uploaded, multiple levels of consolidation needed to be performed. This was achieved using a scheduled set of aggregation oriented stored procedures. The Solution Providers were called after successful data upload by using VB .NET core application.
Automated Reporting	Extensive and focused reporting was required to ensure



Saraansh Component	Description
	that the accumulated data is converted to concise, actionable information. This was achieved using Business Objects. Moreover, a predefined set of reports were needed by specific decision makers on a regular basis. Therefore, this system runs scheduled reports within using Business Objects SDK called from VB.NET core application. The distribution was done using simple emails containing HTML.
Report Subscription Engine	All users have role based access to reports. Standard reports can be subscribed to using this utility. Users can enable / disable subscriptions and change parameters using a web based interface developed using ASP.NET.
SMS Notification of Actionable Information	A third party SMS toolkit was used to disseminate useful, specific information to decision makers using SMS messaging on their mobile phones.

Solution Development Timeline

The project was scheduled; monitored and tracked using Microsoft Project 2002 Server based web-access. The calendar accounted for the following: May 17 to August 12. Well under 90 days. User training requirements were very minimal because most reports were pushed to end users by email and SMS.

Ease of Deployment

Deployment of Saraansh was a cakewalk. All the critical components are server based. At the end user level most information is available through email based reports and SMS messages. For additional reporting needs, the VB.NET reporting engine was linked to the existing intranet of Rallis India. Thus, the deployment was as simple as informing the users that they would now start receiving daily reports automatically. Due to this simplicity, end users at all levels of hierarchy are benefited by the data now made available through Saraansh.

Business Benefits of Saraansh

The business benefits of the new solution include tangibles such as, increased sales, reduced cost and improved customer service. In Mr. Gadre's words, "I have been able to present the sales force with the top ten lists of distributors, retailers, as required, with the additional ability to drill down further to make the data product-specific. This data gives our teams a competitive-edge and wins can be brokered without bureaucratic, time-consuming and pending approvals. Managers have immediate access to corresponding data on gross contributions per sales person, or per product within any geography. It is possible to do cost benefit analysis taking into account varied parameters and scenarios."

Saraansh Operations Benefits include:

1. Reduced dealer outstanding
2. Reduced sales-related expenses, such as non-productive travel
3. Improved planning and timely management of expectations
4. Increased Team-efficiency but enhancing accountability

"From a system development standpoint, VS .NET was really useful in designing and developing a quick and stable product within the delivery deadline.

In addition, choosing the right technology for the right component also helped us build a flexible product which could manage legacy integration, BI and mobility integration effectively."

Dr. Nitin Paranjape

CMD

Maestros Mediline Systems Ltd

5. Reduced communication-costs considerably
6. Orchestrated vast cultural change, organization-wide

“The Rallis personnel really understood the value of Saraansh when a Bombay Bandh was staged. All modes of transport were shut down. All businesses were closed in Bombay. Still all of them received relevant and accurate business information, automatically, on SMS throughout the day,” said Mr. Gadre while describing the achievement of Project Saraansh.

Learning from Saraansh

There is a lot to learn for all CIOs, Architects and Developers. The methodologies utilized in Saraansh are generic enough to be applied to application design needs of other organizations.

“What is significant about this project is that the legacy data existed within the company for years, but was now made available at unheard of frequency – on a daily basis. We like to think of it as legacy enrichment as opposed to a revamp of the IT solution-set,” says Mr. Gadre. He added, “Today if someone is in doubt about sales figures, Saraansh report is the last word.”

Conclusion

“Using the right Microsoft technologies as we did at Rallis, I can confidently claim, that you do not necessarily need to rewrite all existing systems to deliver actionable information that will derive business benefits for all users, across the chain, in a time-bound manner.

“With yesterday’s information, you cannot do business today and hope to be a success tomorrow. You have to be current and armed with facts and data that enable swift decision making at minimum risk. For right decision-making you do not essentially require one hundred percent accurate data. What you need is the best available information at the right time to the right person, at the lowest cost possible.” Mr. Gadre has orchestrated a change in corporate culture, business processes and application technology, all well within his 90-day milestone by relying on the Microsoft platform to provide a common-platform for its messaging countrywide and the Microsoft SQL Server for data warehousing, business intelligence and reporting.

For More Information

For more information about Microsoft products and services, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: For more information about Microsoft products or services, call 1-600 11-1100. To access information via the World Wide Web, go to: <http://www.microsoft.com/india>

For more information on Rallis products or services visit their web site at: <http://www.rallis.co.in>

© 2002 Microsoft Corporation. All rights reserved.

This case study is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS SUMMARY. Microsoft, Windows, SharePoint, Exchange and Active Directory are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

Microsoft®