

Customer Case Study : Tesco

Tesco Real-Time, Point-of-Sale Data Solution processes 1500 POS Transactions a Second.

Tesco Group, the U.K.'s largest supermarket chain, needed a new retail data infrastructure operating in near real-time, to improve store operations, supply chain management and stock availability in its 1,200-plus stores. Tesco selected Sysrepublic Real Time Integrator™ (RTI) along with Microsoft® BizTalk® Server and Microsoft SQL Server™ as the preferred technologies to deliver this vision. The critical business data made available through this infrastructure has given Tesco head office staff and systems a single, near real-time view of supermarket sales data from all its stores, which was previously unavailable in such detail or in such a timely manner.

The solution handles 1500 XML POS transactions a second at peak times, which each have an average of between 50 and 100 sales items. All transactions are stored in a single multi-terabyte SQL Server™ database and are also published for subscription by real time

Key Highlights

- Single source of data from stores
- Better informed management
- Delivers details of every product that passes through the tills
- Delivers all Till Events and Alerts (e.g. Cashier Sign On)
- Data delivered in a single, versatile format (XML)
- Scalable solution to match business growth.

“ SQL Server and RTI 2.0 together have proved that they can handle two terabytes of POS data equivalent to three weeks of sales data. The solution is highly scalable and populates the SQL Server database at a rate of up to 20,000 inserts a second. ”

Simon Alcock - Tesco

A Single View
of Sales &
Stock
Delivered in
Real-Time

Understanding POS Data IS the Advantage

The Situation

Tesco is the U.K.'s largest supermarket chain, the national leader in the food sector, and a global player in retailing with outlets in Ireland, Central Europe, and Asia. Over the past 78 years, as the retailing market has changed, the company has grown and developed, responding to new opportunities and pioneering many innovations, including online sales. Tesco, with 1,200-plus stores and almost 250,000 employees, is described by many analysts as the 'king of supermarkets' in the U.K. Apart from its familiar high street supermarkets, it operates small grocery stores under the Tesco Metro brand name, big supermarkets outside cities (Tesco Extra), and 24-hour stores.

Point-of-sale (POS) data is the lifeblood of any supply chain. Supermarkets, especially, use this information to understand and anticipate customer behaviour, manage stock in individual stores, above all, the speedy availability and accuracy of POS data makes a fundamental difference to a retailer's competitiveness and the strength of its supply chain.

For Tesco managing the supply chain is critical to maintaining its leadership in the industry. Specifically this means ensuring a high degree of product availability at all times. In a highly competitive market if a customer can't find an item in a Tesco store, there are many other retailers they can turn to. Optimising the operational effectiveness of a store is also a key focus area which means a complete understanding of factors such as queue lengths, cashier and equipment performance is vital in order to gain and maintain an advantage.

As the UK's most successful, supermarket chain, Tesco is constantly refining the way in which it sources, analyses, and manages POS data. In late 2003, Tesco began working on a new real-time retail infrastructure based on Sysrepublic RTI and Microsoft technologies.

“ We were confident from our experience with other customer implementations that these technologies were equal to the task and Tesco are very happy with the results. ”

Nathan Smith - Sysrepublic

RTI Integrates POS with the the rest of the Business

The Solution

Sysrepublic Real Time Integrator (RTI) enables retailers to integrate in real-time with diverse and highly federated environments such as POS. This opens up new channels with faster access to critical business information, through use of accurate, detailed, POS information. RTI can help to address issues, such as stock availability, loss prevention, customer service, in-store productivity, and promotion tracking and through Web Services initiate a series of responses without needed manual intervention. It is implemented using Microsoft® BizTalk® Server, part of the Microsoft Windows Server System, and the Microsoft .NET Framework for development. Data from individual stores is captured using RTI and transmitted via XML Web services through BizTalk Server, RTI and into a single Microsoft SQL Server 2005 database.

The End Product

Within six months Tesco and Sysrepublic, have successfully deployed a real-time sales data infrastructure that delivers:

- POS transaction feeds from more than 1,200 stores.
- A highly scalable interface that accepts up to 1,500 baskets a second.
- Capacity for two terabytes of POS data
- Using minimal network bandwidth.
- Further flexibility for extension using the .NET Framework.

“Initially there was a good deal of scepticism at Tesco that the technology could handle as many as 1500 combined POS Sales transactions and Till Events a second at peak times. The Sales transactions include an average of between 50 and 100 items, customer information, and discounts. But, we were confident from experience with other customers that the solution was equal to the task and Tesco is very happy with the results.”

Nathan Smith - Sysrepublic

Improved Supply Chain Management



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Key Benefits

A Single View of Supermarket Sales Data

Tesco will use RTI with BizTalk and SQL Server to give its head office management team a single view of supermarket sales data from all its 12,000 plus stores. Simon Alcock - Tesco says: "The solution gives us one version of the truth. Before we considered adopting RTI we relied on several different databases.

"Even when we integrated the databases, and, for example analysis showed that one was flawed, we could not work out which one was faulty. We will now have one database, with links to our loyalty scheme Clubcard, and will improve customer relationship management (CRM) throughout our stores."

Efficiency Gains from Improved Supply Chain Management

The biggest long-term benefit of RTI using highly scalable Microsoft technologies is that it accelerates the supply chain, reduces 'out of stocks', and helps to retain customer loyalty. Nathan Smith - Sysrepublic says: "With a reliable, scalable platform, Tesco has minimised IT management costs. The real-time, up-to-date metrics give managers a view of individual store performance, giving them the information to take corrective action where required much more quickly. Importantly, with the basics in place, it provides a strong base for other real-time applications, including labour monitoring, and inventory management."

A Resilient and Reliable Data Infrastructure

The proof of concept for RTI showed that Microsoft technologies provide a resilient and reliable data infrastructure. Alcock says: "SQL Server and BizTalk have proved that they can handle two terabytes of POS data-equivalent to three weeks of sales. The solution is highly scalable and inputs data into SQL Server at up to 20,000 inserts a second. Any scepticism we may have had about these technologies and their suitability for the enterprise no longer exists."

About Sysrepublic

Sysrepublic specialise in the provision of software products and consultancy services for the retail and hospitality sectors. Sysrepublic are industry pioneers in the use of Microsoft technologies for the implementation of Real Time Retailing and Loss Prevention.

Sysrepublic works with major retailers worldwide to deliver industry leading integration and data exploitation solutions.