



## Overview

Country or region: India  
Industry: Manufacturing, Retail

### Customer Profile

GKB Hi-Tech Lenses Ltd. satisfies more than 7 million spectacle wearers worldwide every year. With a total manufacturing area of more than 300,000 sq. ft., GKB Hi-Tech is always up to date with the latest technological advances in the optical industry.

### Business Situation

As GKB Hi-Tech grew, it needed an efficient, precise way to track orders. It wanted to make it easier for its customers to gain visibility into the order manufacturing process.

### Solution

The company deployed the S3Edge RTVS™ Work-in-Process Solution which includes Microsoft® BizTalk® Server 2006 R2 with BizTalk RFID to automate real-time and human workflow extensions for Work-in-Process deployments.

### Benefits

- Increases visibility into manufacturing operations
- Enhances order fulfillment
- Reduces costs
- Tracks assets in real time

## Lens Manufacturer Optimizes Order Management with RFID Technology

“Visibility in manufacturing processes means that we reduce dwell time, and therefore, increase in-yield. This helps reduce our turnaround time by 23 percent in overall manufacturing processes.”

Mr. Manish Soni, General Manager, GKB Hi-Tech Lenses Pvt. Ltd.

GKB Hi-Tech Lenses is the first company in India to manufacture progressive, hi-index, multicoated and free form lenses. With exports to over 40 countries worldwide and a domestic market share of 40 percent, GKB wanted to make it easier for its customers to gain visibility into the order manufacturing process. To address the need, the company chose the S3Edge RTVS™ Work-in-Process Solution. Based on Microsoft® BizTalk® Server 2006 R2 with BizTalk RFID (Radio Frequency Identification) the solution automates real-time and human workflow extensions for Work-in-Process deployments. By seamlessly extending the existing legacy order management system with an automated RFID-based infrastructure, GKB improved order visibility, cut costs, and enhanced customer service. With better visibility, customers can now closely track and manage orders, a task which is much easier now.



“The solution takes advantage of the broad RFID capabilities in BizTalk Server 2006 R2 to provide a solution that is easy to deploy and manage, and that provides a real-time view of the order manufacturing processes.”

Mr. Manish Soni, General Manager, GKB Hi-Tech Lenses Pvt. Ltd.

## Situation

GKB Hi-Tech Lenses is the first company to manufacture progressive, hi-index and multi coated lenses in India. The company has more than 700 automated lens manufacturing machines producing glass and plastic ophthalmic lenses, having a capacity to manufacture 3 million prescription lenses, 3.5 million hard coated lenses and 6.2 million stock lenses yearly.

In addition to exporting lenses to over 40 countries worldwide, GKB Hi-Tech Lenses has grown to be one of the most successful and largest ophthalmic lens manufacturers in India, with a market share of 40 percent, and an annual sales of U.S.\$ 48 million. It has also opened its own subsidiary in South Africa. Today, the company has a chain of 120 retail showrooms.

GKB Hi-Tech has been using Drishti Order Management System for all its order management requirements. It is a homegrown ERP system that does one thing very well – Order Management. However, with rapid growth, GKB wanted order visibility, in addition to order management.

GKB Hi-Tech wanted to track orders throughout their manufacturing process in real-time, which was not possible the existing system. This often resulted in issues such as:

- Lack of visibility into real-time order status, and hence the inability to increase priorities of orders being processed and reschedule delayed orders.
- Lack of audit trails for orders processed, especially if it involves a quality control check that resulted in re-routing of the order.

- Increase in dwell time (Period during which a process is halted in order to complete another process) if priority is unknown.
- Increase in customer promise violations, stuck orders, and inability to get snapshots of processing workloads across a facility.

“Ideally, we wanted visibility into every step in the order manufacturing process,” says Mr. Manish Soni, General Manager, GKB Hi-Tech. “We therefore wanted a system that could fulfill all our customers’ requirements. Our primary aim was to effectively track activity at each manufacturing station and trace the build to order process through their lifecycle.”

## Solution

GKB Hi-Tech decided to work with S3Edge Inc., a software solutions company founded in 2007 by ex-principals of the Microsoft BizTalk RFID team. GKB decided to deploy the S3Edge RTVS™ Work-in-Process Solution that uses radio frequency identification (RFID) technology.

Based on Microsoft® BizTalk® Server 2006 R2 with BizTalk RFID, this solution automates real-time and human workflow extensions for Work-in-Process deployments with packaged software.

BizTalk Server 2006 R2 puts real-time, end to end supply chain management within reach, spanning systems, people and processes, both within and across organizational boundaries. It empowers organizations to make informed business decisions with real-time data from geographically dispersed, yet

integrated systems – putting you one step ahead of the competition.

BizTalk Server 2006 R2 includes a RFID Server that is capable of accessing and working with RFID data from multiple sources. BizTalk RFID is an innovative device management and event processing platform at the edge of the enterprise. It is designed to provide a scalable, extensible platform for development, deployment, and management of rich RFID and sensor solutions – along with Microsoft SQL Server™ 2005 database software.

GKB Hi-Tech, uses the solution for Work-In-Process Manufacturing of custom optical lenses to enable processing, storing, searching, and prioritization of orders at each station in real-time.

The goal of the RTVS™ WIP Solution is to use RFID and other auto-identification technologies to seamlessly provide work-in-progress visibility in a pervasive but non-intrusive fashion. It is pervasive in the sense that the entire lifecycle of the product creation process is tracked; it is non-intrusive in that the operator does not have to perform any additional steps or be trained on any new technology to realize the value of the solution.

Once the process flow information is gathered in Microsoft Excel forms to specify the 'plans' for the solution, the S3Edge solution provides for real-time decision making and analytics capabilities, in addition to providing data that can be used for further business intelligence. The former helps to make real-time choices in the plant floor or assembly line; the latter enable

holistic business process improvements over the long-term.

"We started discussions with S3Edge in May 2008," says Mr. Manish Soni. "We studied the requirements for the solution till June 2008, and by August 2008 started deployment, which was completed by month end." He adds, "The pilot was carried out in September and October 2008 and finally production started in November 2008."

Except for the requirements and deployment phases, all phases were carried out from the S3Edge development center in Hyderabad, India. The requirements phase and deployment phase was done onsite in Goa at the customer location.

The solution takes care of:

- Real time display at each factory, work-station. This helps employees in deciding which orders to work on first.
- Excel based configuration for capturing the names of various work-stations as well as process times at each of those stations.
- Administration and monitoring scripts.

With the new solution, GKB has completely eliminated the need for manual data entry or tracking. The solution provides for real-time error checking, verification, and feedback at each step of the process. This prevents errors from occurring and propagating throughout the manufacturing floor. It also monitors and surfaces exceptions in real-time.

"The RTVS™ WIP Solution delivered on the promise of real visibility, real time in record time to enable GKB (Carl Zeiss

Vision JV partner) to continue to raise the bar in the level of service,” comments Manish Soni, General Manager, GKB Hi-Tech. “The solution was delivered at ZEISS Brand Lab at Goa (a Carl Zeiss Star One accredited lab). In addition to enabling fewer delayed orders, and a multi-fold increase in customer satisfaction with a RFID based solution on the manufacturing floor, S3Edge is also closely working with us on designing innovative solution for our retail stores in India to further increase our customer value.”

### Benefits

In addition to being the first production deployment of a real time application utilizing RFID on the BizTalk RFID platform in India, the system has a direct impact on lowering GKB Hi-Tech’s operational expenses and deploying innovative new processes to increase customer loyalty and service.

“The deployment takes advantage of the RFID capabilities in BizTalk Server 2006 R2 to provide a solution that is easy to deploy and manage, and that provides a real-time view of the order manufacturing processes,” remarks Mr. Manish Soni.

#### **Increases Visibility into Manufacturing Operations**

Gaining visibility into work-in-process is critical for most manufacturing, assembly, and product lifecycle management applications. The parameters of visibility include presence, location, auditing, start/stop information, and other contextual information.

The S3Edge RTVS solution provides the components for real-time visibility, more accurate and timely predictive analytics, triggers, and business alerts. The company has gained real-time visibility into all of its order manufacturing operations. The solution has helped to get a much clearer view of the flow of products and thus increased the accuracy of fulfilling orders to 98 percent.

#### **Enhances Order Fulfillment**

Orders with extended dwell time have a better turnaround time by over 80 percent. “Visibility in manufacturing processes means that we reduce dwell time, and therefore, increase in-yield. This helps reduce our turnaround time by 23 percent in overall manufacturing processes,” says Mr. Manish Soni.

The solution also reduces customer order-promise violations. Delayed orders are now fixed in-flight and finished on time. The solution also enables distributed real-time workflow processing across central server, edge server and display devices at each station in a scalable manner – up to 3000 orders processed in a day in real-time.

#### **Reduces Costs**

Controlling costs is a major competitive weapon used by all manufacturers, and one of the biggest drains on finances is holding extra inventory for long periods of time. But with the new solution there is lesser resource requirements to chase down ‘missing’ or ‘stuck’ orders. Process improvements based on station utilization has direct impact on reducing operational expenses due to better planning and execution of jobs.



### **Tracks Assets in Real Time**

Another additional benefit of the solution is to enable real-time product track-and-trace, and recall functionality, where the “pedigree” or origination information regarding the item is made available for decision making at a later point. This can be extremely important in scenarios where there is a need to identify items that were also manufactured with a particular item, or items that were processed on a particular station.

“In the past, a customer rarely knew the order manufacturing details not to mention that it was a time consuming and difficult task,” says Mr. Manish Soni. “But with the new solution, they can easily track orders at all times.”

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about GKB Hi-Tech Lenses products and services, call +91-832-2257371 or visit the Web site at: [www.gkbhitech.com](http://www.gkbhitech.com)

For more information about S3Edge Inc. products and services, call +1-310-943-7992 or visit the Web site at: [www.s3edge.com](http://www.s3edge.com)

## About S3Edge Inc.

S3Edge is a software solutions company founded in 2007 by ex-principals of the Microsoft BizTalk RFID team, with headquarters in Portland, USA and offices in Hyderabad, India and Los Angeles, USA. With deep expertise in RFID, mission-critical enterprise software, and the Microsoft platform they have a proven track record of creating enterprise software products at organizations including Microsoft, Computer Associates, and Amazon.com. They are passionate about the promise of RFID to change the way businesses interact with the physical world, and the enormous business potential of real-time solutions that deliver on this promise.

## Microsoft Server Product Portfolio

For more information about the Microsoft server product portfolio, go to:

[www.microsoft.com/servers/default.mspx](http://www.microsoft.com/servers/default.mspx)

### Software

- Windows Server System
  - \_ Microsoft BizTalk Server 2006 R2
  - \_ Microsoft SQL Server 2005

### Hardware

- Dell T105

### Partner

- S3Edge Inc.