

# Case Study

Dorset Software: driving efficiency and productivity across the retail sector

## TBS Ltd



TBS Ltd is the UK's leading book distributor, delivering over 100 million units, each year. A fully owned subsidiary of the Random House group, it achieves an overall market share of 14 per cent.

### Solution Snapshot

A voice activated warehouse picking system, utilising Microsoft .NET technologies connecting to a central SQL server database. The system interfaces with specialist warehouse management software and a recognised SAP solution.

### Key Benefits

- Order picking accuracy rose by 4 per cent, following delivery
- Productivity attributable to the system rose significantly
- Workflow transparency increased, isolating additional savings
- Efficiency savings allow cost benefits to be passed to customers
- Increased distribution capacity can be offered to existing clients
- Orders can be completed with greater speed flexibility

*"TBS found that there was a high level of comfort with Dorset Software, as calls were logged and resolved on time, providing a very good level of service."*

Ian Cottee, Operations Development Manager, TBS

### The Challenge

In order to update an ageing paper-based order picking system, TBS partnered with industrial computing specialist Psion, alongside technology provider Vocollect Inc. Dorset Software was chosen to provide technical support for the incoming automated voice warehouse picking solution.

TBS recognised a need to enhance accuracy and efficiency within its warehouse operations. Increased visibility over work trends would also permit swift and intelligent responses.

It was decided that a mobile handset based voice picking system would address these concerns most effectively. A recognised return on investment was envisioned within just 18 months.

### The Solution

TBS observed that voice recognition technology had grown mature enough to be implemented within a modern distribution environment. Consequently a voice picking solution was provided, utilising hardware and software from Psion and Vocollect, Inc.

Given the system's business-critical nature, a need arose for technical support to be provided, ensuring the long-term stability of TBS' operations.

Having extensive experience in the provision of support for business-critical Psion systems, Dorset Software was chosen to provide TBS with 24-hour support services. A range of ad-hoc code and device maintenance issues were addressed by Dorset Software staff.

### The Benefits

According to TBS Operations Development Manager Ian Cottee, the benefits of Dorset Software supported voice picking systems were clear. "When the solution was implemented in 2006", he notes, "accuracy went from 95 to 99 per cent. Overall productivity was increased by a further 10 per cent".

Besides the above rises in productivity and efficiency, the system provides TBS with real-time data on the location of both stock and staff, increasing transparency and allowing workflow to vary based upon where attention is needed.

"We are very happy with the service and support we have received from Dorset Software," Cottee concludes.



DORSET SOFTWARE

## The Challenge

Featuring over 24,000 pallet locations, TBS' Frating distribution facility carries the potential for an array of possible pick types, including complete pallet picks and individual item picks, covering multiple levels of elevation. With a legacy, paper ticket-based picking system in place for a period of some years, there was potential for the organisation to realise significant operational advantages through the introduction of a new system.

TBS recognised a need to enhance accuracy and efficiency within its warehouse operations. Increased visibility over work trends would also permit swift and intelligent responses. It was decided that a mobile handset based voice picking system would address these concerns most effectively.

Furthermore, TBS stood to take significant strides ahead of its competitors, due to its pioneering forethought in a market sector unwilling to adopt new efficiency technologies. A recognised return on investment was also envisioned within just 18 months, making the final decision on the system's implementation a relatively simple process.

*"With Dorset Software supporting the solution, TBS has peace of mind and no significant periods of downtime."*

Ian Cottee, Operations Development Manager, TBS

## The Solution

TBS observed that voice recognition technology had grown mature enough to be implemented within a modern distribution environment. Consequently a solution was provided, utilising hardware and software from both Psion and Vocollect, Inc. Given the system's position at the heart of TBS' commercial operations, a need arose for technical support to be provided, ensuring its long-term stability.

Having extensive experience in the provision of support for business-critical Psion systems, Dorset Software was chosen to provide TBS with round-the-clock care.

## Functionality

End users utilise Vocollect Talkman T2X voice handsets within a live warehouse environment, receiving audio direction containing up to 70 words or numbers, indicating the position of required stock items. Voice technology is utilised both for order picking and the replenishment of stock items.

Overall picking workflow is generated centrally by specialist warehouse management software interfacing with a recognised sales order process solution. Workflow is delivered to each Talkman T2X handset as users initially log on to the system.

Once loaded onto each tablet, Vocollect software translates each file into synthesised speech, ready for delivery to the end user as work is undertaken. Utilising a small, accessible selection of possible voice inputs, items are acknowledged as picked or absent by users as time progresses. The system also attempts to alter end users' picking schedule in order to cut down on time spent travelling between jobs.

Each tablet exports a live stock update back to the central server based on this information, allowing administrative users thorough insights into current warehouse capacity and efficiency. The system's overall picking strategy can be altered at any time by an administrator. Hence, live information on the warehouse's usage patterns can be utilised to instantly improve the efficiency with which items are picked.

Full reporting functionality is also available, offering an opportunity for staff performance data to be rigorously interrogated, isolating areas in which further productivity gains can be made.

Dorset Software provides TBS with 24-hour technical support, covering a range of scheduled issues and ad-hoc code or device maintenance - allowing TBS to concentrate fully on matters crucial to its business.

## Technology Snapshot

The voice picking solution is developed using Microsoft ASP.NET technologies, connecting to a central SQL Server database. Vocollect Talkman T2X hardware provides synthesised speech to end users, plus the voice recognition technology that provides the system's most common input mechanism.

The solution also interfaces with TBS' own specialist publishing warehouse management software, Vista, which itself interfaces with an SAP solution in order to generate workflow.

## The Benefits

The impact of Psion and Vocollect's Dorset Software supported solution was clear and near-instantaneous.

"When the solution was implemented in 2006", Operations Development Manager Ian Cottee reveals, "accuracy went from 95 to 99 per cent, while overall productivity was increased by a further 10 per cent".

Besides the above increases in general productivity and operational accuracy, the system provides TBS with up-to-the-second data on the location of both stock and staff, increasing transparency and allowing workflow to vary based upon where attention is most needed.



Dorset Software operational support assists TBS to reduce disruption in supply to its customers.

Thus, attention can be focused on neglected stock lines, but replenishment work can also be postponed until the time at which it is necessary, allowing TBS to realise a significant increase in efficiency.

Cottee leaves no room for uncertainty when describing TBS' working relationship with Dorset Software, or the quality of support he has received.

"We are very happy with the service and support we have received from Dorset Software," Cottee confirms. Describing the relationship with Dorset Software's team of experienced support engineers as "comfortable" with "no issues", he underlines the benefits of choosing voice picking software solutions, supported by Dorset Software.

## The Future

Plans are already in place to renew the hardware supported by Dorset Software upon the end of its commercial life. Based upon cost considerations, TBS is considering upgrading from Vocollect Talkman T2X tablets to Vocollect Talkman T5 tablets, gaining wireless Bluetooth functionality, greater overall connectivity and the opportunity to improve productivity still further.