



**BOUNDARY
BEND
LIMITED**



Overview

Country or Region: Victoria, Australia

Industry: Agriculture

Customer Profile

Boundary Bend Limited is a leading supplier of Australian olive oil to domestic and export markets. The company manages 2.5 million trees from growing through to oil bottling and storage.

Business Situation

Boundary Bend Limited's olive oil production and sales increased from 80,000 liters in 2002 to 3,500,000 liters in 2007. It needed to automate collection of processing data to accommodate current production and future growth.

Solution

Boundary Bend Limited created a custom application using Microsoft Visual Studio 2005 and Microsoft SQL Server 2005 to log and analyze harvest and processing data. The application provides a company-wide view of fruit and oil production as well as oil movements and stocks.

Benefits

- Optimized resource usage.
- Provided complete traceability.
- Aggregated management information.
- Met regulatory requirements.
- Reduced management workload.



Olive oil maker beats climate challenge with Microsoft information management tools

“We may be able to reduce our water usage by as much as five to ten percent. That’s of considerable benefit in the Australian agricultural climate, where water is an increasingly precious resource.”

Leandro Ravetti, Director, Boundary Bend Limited

Leading Australian olive oil producer Boundary Bend Limited needed to automate data collection from its olive processing facilities to accommodate production growth. It installed an automated system using electronic swipe cards, touch screens, and weigh stations, which allowed harvest data across multiple olive groves and production facilities to be centralised in a Microsoft SQL Server 2005 database. This application produced a company-wide perspective on olive oil production and stocks. The company used Microsoft SQL Server Reporting Services to optimize its use of resources and track the lifecycle of olives through harvest, processing, and blending. Replicating data between sites improved security, satisfied regulatory requirements, and reduced risk. The company can now ensure product traceability and plan product blends based on current stocks and customer demand.

“We may be able to reduce our water usage by as much as five to ten percent. That’s a considerable benefit in the Australian agricultural climate, where water is an increasingly precious resource.”

Leandro Ravetti, Director, Boundary Bend Limited.

Situation

Boundary Bend Limited is a leading Australian olive oil producer. The company manages 2.5 million trees through the product lifecycle from growing trees to oil blending and bottling. It markets olive oil to domestic and export markets through fully owned subsidiaries Boundary Bend Marketing and Cobram Estate.

Based in central and north-western Victoria, Boundary Bend Limited’s 3,000-hectare (7,400-acre) managed groves are amongst the largest in the world. In addition to over two hundred thousand olive trees in its own grove, the company has a significant business managing groves on behalf of other companies, including agribusiness investment company Timbercorp Ltd.

“We’re the largest vertically integrated olive oil producing company in Australia and we provide technical advice and olive grove management services for other companies in Australia and overseas,” says Boundary Bend Limited Director Leandro Ravetti. “That side of the business has been growing consistently for six to seven years and was getting increasingly complicated to maintain our management standards. There was a lot more data to handle, more sites, and less time.”

Boundary Bend Limited did not use technology extensively; the company had around 55 PCs and managed the harvesting, processing, and blending of olives using a paper-based system. However, the amount of information the company needed to manage was large and growing fast.

Olive oil production had grown from 80,000 liters (21,100 gallons) in 2002 to 3,500,000 liters (924,000 gallons) in 2007. This growth pushed the company’s system resources to capacity during the eight-week harvest

period, when the harvesters and processing facility operate around the clock.

As the 2005 harvest season approached, Boundary Bend Limited decided it needed an automated system to manage olive processing and oil movements. The company wanted to increase its data management capabilities and allow for more sophisticated analysis and modeling of the data it collected on variables such as climate and soil. The existing paper-based system could take weeks of manual effort and was prone to error.

“We’re a vertically integrated company but the data was processed separately by different management areas,” says Ravetti. “We were operating most of our production data from Microsoft Office Excel spreadsheets. It was practically impossible to sit down and make the most of the analysis from this data. It was hard to explore trends or do any kind of modeling, other than punching data into the computer. We needed to manage data for all the groves and transfer that information to others.”

The company wanted a system which could manage the oil manufacturing process at each site and provide a company-wide perspective on production and stocks. In addition, Boundary Bend Limited’s largest grove management client, Timbercorp, needed reliable and accurate data on the performance of its groves. The new system needed to meet those record-keeping requirements.

Boundary Bend Limited wanted a web-based system that would allow access to information across its own groves and those it managed for clients. The ability to trace the origins of each batch of oil was a critical regulatory requirement.

“With more accurate data and sophisticated modeling capabilities, we can better manage grove irrigation and fertilization. It really maximizes our control over what happens on our farms.”

Leandro Ravetti, Director, Boundary Bend Limited.

Solution

Boundary Bend Limited and Timbercorp interviewed three different vendors, who offered different solutions. The company selected the proposal from Microsoft Certified Partner Wave, a data warehousing and business intelligence specialist.

Eight weeks before the 2006 olive harvest, Wave began working with Boundary Bend Limited and report customer, Timbercorp Limited, to develop a custom application to track olive processing. The new Olive Management System was built using Microsoft Visual Studio 2005 and the .NET 2.0 Framework, and stored data on a Microsoft SQL Server 2005 database.

In the first wave of deployment, the Olive Management System was deployed at Boort grove in central Victoria. It automatically collected fruit delivery data from weighbridge controllers and swipe card readers.

However, the system also allowed for oil processing data to be entered manually into touch-screen computers that tallied the olive oil yield. Subsequently, the Olive Management System could trace the origin of each load and calculate process efficiencies.

The application used SQL Reporting Services to analyze data captured from each of the multiple points in the olive extraction process, giving Boundary Bend Limited a comprehensive view on the entire delivery and production process.

In late-2007 Boundary Bend Limited and its fully owned subsidiary, Modern Olives, approached Wave again, and asked them to devise a system that could collect and analyze grove management information prior to the harvest. The application needed to capture data about grove conditions (e.g. climate, soil composition, leaf chemistry, tree growth) and then model that data to

determine the optimum quantities of water and fertiliser to maximise olive oil yield. Developed using Microsoft SharePoint Services 3.0 and SQL Server 2005, Wave helped Boundary Bend Limited to deploy the new Grove Management System in the second quarter of 2008.

Benefits

The original Olive Management System has helped Boundary Bend Limited achieve cost and production improvements, meet customer and regulatory requirements, and spend more time running and growing the business.

Optimized production and water usage

Applying modern information management techniques to the ancient art of olive growing enabled Boundary Bend Limited to increase its production while decreasing usage of scarce resources. At a time when Australia is struggling to solve its ongoing water shortage, Boundary Bend Limited's olive management application has achieved impressive savings in costs and resources.

“We may be able to reduce our water usage by as much as five to ten percent,” says Ravetti. “That's a considerable benefit in the Australian agricultural climate, where water is an increasingly precious resource.

“With more accurate data and sophisticated modeling capabilities, we can better manage grove irrigation and fertilization. It really maximizes our control over what happens on our farms.”

Exceeded information requirements

The Olive Management System has exceeded Boundary Bend Limited's expectations as an information management tool.

“We have been very impressed with the results,” says Ravetti. “Moving from a largely paper-based system to a database has given

“We now have a company-wide view of olive production and stocks, which means we can make better decisions on harvesting, processing, blending, and bottling in response to customer demand.”

Leandro Ravetti, Director, Boundary Bend Limited.

us more accurate and traceable information, much faster.”

The Olive Management System’s detailed reports have enabled the company to greatly improve data visibility and forecasting.

“We now have a company-wide view of olive production and stocks, which means we can make better decisions on harvesting, processing, blending, and bottling in response to customer demand,” says Ravetti.

Traceability and compliance

The application has also enabled Boundary Bend Limited to meet customer and regulatory demands for information visibility.

“We can provide Timbercorp accurate and timely reports on the grove management services we provide,” says Ravetti.

“Replicating data between sites also allowed us to meet our own and Timbercorp’s risk-management requirements. We can also meet our regulatory requirements around traceability.

Saving management time

The Olive Management System has expanded Boundary Bend Limited’s processing capacity to cope with projected growth. The new system has also freed up management time, a key requirement of the project.

“We had been forced to reconsider taking on new technical consultancy business because the technical advice team was too busy,” says Ravetti. “The Olive Management System has given us time and headspace to concentrate on running and growing the business according to our own high standards.”

Future plans

Boundary Bend Limited and Wave are currently working on a new version of the application that takes advantage of some new features of Microsoft SQL Server 2008.

“Microsoft SQL Server 2008 will allow us to keep track of groves using global positioning system (GPS) coordinates and view all our assets on a map,” says Ravetti. “We will be able to use web-based services such as geo-tagging to collect data from groves, and offer new services such as climate modeling.”

The next enhancement for the Olive Management System, due for mid-2008, is to implement data replication so that data from the Boort and Boundary Bend groves is available in the central bottling and storage facility in Lara, north of Geelong. This version of the application will allow oil stocks to be centrally monitored and make it significantly easier to blend oil from any or all of the three sites by the company’s highly qualified team of quality control and olive oil specialists.

Boundary Bend Limited eventually hopes to recoup its investment in software development by making data from the Olive Management System available to customers over the web. Additionally, a modified version of both the Olive Management System and the Grove Management System could have commercial application for other primary producers.

“This could eventually be a tool for any agricultural management company with a vertically integrated approach to production,” says Ravetti.

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

For more information about Wave products and services, call +61 3 9935 2770 or visit the Web site at: www.wavebusiness.com

For more information about Boundary Bend Limited products and services, call +61 3 5272 9500 or visit the Web site at: www.boundarybend.com

Software and Services

- Products
 - Microsoft Visual Studio 2005
 - Microsoft Windows SharePoint Services 3.0
 - Microsoft SQL Server 2005

Hardware

- Advantech PPC-154T Touch Screen PC
- Rinstrom Ranger 9000 Weighbridge Controller
- FlexPass Serial Mid-Range Proximity Card Reader

Partners

- Wave

This case study is for informational purposes only. MICROSOFT MAKES NO WARRANTIES, EXPRESS OR IMPLIED, IN THIS SUMMARY.

Document published February 2008

Microsoft®