

BUSINESS BENEFITS SERIES

BUSINESS BENEFITS SERIES HIGHLIGHTS

- Decreased finance's month end close time by 80%
- Saved US\$1.9 million in material purchase costs
- Reduced inventory levels by 30%
- Decreased production waste by US\$1.8 million
- Improved cash flow by 20%
- Improved planning boosted production capacity by 100,000 tons

COMPANY PROFILE



Tsingtao Brewery
Qingdao City, China
www.tsingtaobeer.com

For more than 100 years, Tsingtao Brewery has provided superior quality beer to markets in China and around the world. Tsingtao is the number-one selling beer in China and the leading Chinese beer in the United States.

Industry
Consumer Goods

Chief Executive
Jin Zhiguo

Chief Information Officer
Liu Yingdi

Revenue
\$1.25 billion

Employees
More than 27,000

Tsingtao Brewery Taps Into Global Markets with Integrated Financial, Manufacturing and Supply Chain Platform

EXECUTIVE SUMMARY

Founded by German settlers in Qingdao, China, Tsingtao Brewery has been making superior beer for more than a century. Tsingtao is the number one beer in China and the top-selling Chinese beer in the United States. Worldwide, the Tsingtao brand is sold in more than 40 countries, accounting for more than 50% of China's total beer exports.

Capitalizing on its strong brand, Tsingtao (pronounced "ching dow") has joined China's push into international markets, becoming a role model for Chinese enterprises seeking to operate globally. To support the move, Tsingtao rapidly grew its production capacity through a series of acquisitions, and today the company relies on some 50 breweries and a complex network of suppliers and distributors to meet global demand.

The increasing complexity, however, posed operational challenges for the company, which was determined to maintain consistent brand and product quality in every market. Tsingtao responded in 2002 by investing in a tightly integrated enterprise platform based on Oracle E-Business Suite applications for financial management, procurement, inventory, sales ordering, and manufacturing.

A recent study conducted by business consultant Mainstay Partners evaluated Tsingtao's Oracle investment, documenting benefits and competitive advantages in each of these core business areas. Key improvements included:

- Tighter financial control and faster reporting, which drove better decision-making, enabled local regulatory compliance, and boosted investor confidence;
- Better integration and tracking of inventory, which cut stock carrying costs, saving US\$975,000, and minimized write-offs and waste, saving US\$1.8 million per year;
- Consolidated and automated procurement processes, leading to price savings of \$1.9 million per year;
- Optimized production and supply chain planning, which expanded plant output by 100,000 tons without adding costs, saving US\$3.4 million per year in staff and capital costs.

Overall, Mainstay is projecting annualized benefits of \$8.075 million from Tsingtao's Oracle investment. Over five years, Tsingtao is on track to realize an estimated 82% net return on investment, equating to an internal rate return of 75%. Based on its analysis, Mainstay expects the Tsingtao to achieve payback in about 31 months.

ORACLE PRODUCTS AND SERVICES

- Oracle Financials
- Oracle Order Management
- Oracle Purchasing
- Oracle Inventory Management
- Oracle Financial & Sales Analyzer
- Oracle Process Manufacturing

// In order to become a truly international company, we needed integration. By providing us with a unified management platform, Oracle has played an important role in this integration process. //

Wang Dong
Vice Director of IT
Management
Tsingtao Brewery

BACKGROUND

As Tsingtao steadily expanded into global markets, it acquired dozens of companies and facilities and diversified its product line, increasing the complexity of its supply chain. The operational complexity posed challenges for Tsingtao as it sought to maintain product and brand consistency in every market, and achieve its strategic goal of “one brand, one image.” Challenges ranged from integrating financial and manufacturing operations across diverse business units and cultures to managing suppliers and tracking vendor performance.

In response, the company launched a series of initiatives starting in 2002, investing in new information technology and restructuring business processes to integrate and optimize core functions such as finances, manufacturing, and procurement. Specific business objectives included:

- Streamline production and distribution channels to speed deliveries to customers and ensure product freshness
- Improve inventory management to ensure high quality raw materials
- Automate and increase visibility into finances to speed reporting and decision-making
- Strengthen relationships with suppliers and improve monitoring of contract performance
- Gain a stronger awareness of global business risks and opportunities

STREAMLINED MAINTENANCE OPERATIONS

Mainstay documented immediate improvements in key financial management performance metrics in the months following the Oracle implementation. Among these benefits:

- **Faster Closes, Better Reports**
Tsingtao cut manual errors and redundant data entry, and shrank the time needed to close monthly financial accounts by two-thirds (from six to two days), and reduced the time to consolidate corporate accounts from 60 minutes to just 10 minutes because the system integrates financial data from business units using a unified data model. The company generates basic financial reports 75% faster (in 30 minutes on average compared to two hours before) and with less manual intervention.
- **Faster Planning, Proactive Course Corrections**
Faster access to financial data (real-time versus monthly) is helping Tsingtao quickly reverse negative trends such as overspending. The company develops weekly financial plans in just 1½ hours compared to a week before, and uses one-third fewer employees in the process.

// Oracle Financials allows us to spend more time analyzing financial information and less time collecting it. //

Ms. Cui
Financial Manager
Tsingtao Brewery

// With the inventory module, we can work together with all our business units to obtain accurate supplier, lead-time and demand information—and determine the best strategy to optimize our inventory. //

Ms. Zhang
Manager
Tsingtao Brewery

- **Flexibility to Support Local Compliance**
By supporting multiple financial reporting structures, the Oracle platform helps Tsingtao local tax and regulatory demands more easily. For example, it helps Tsingtao comply with the slightly varying requirements of the Hong Kong and Shanghai stock exchanges. Meanwhile, multi-level budget and forecast reports enable management to track actual performance and quickly address deviations from plan.
- **Global Investor Confidence**
Tsingtao executives said that the integrated Oracle financial platform is helping boost the confidence of global investors, such as Anheuser-Busch, which expect prompt, accurate financial guidance. Executives said investors are encouraged by the fact that Oracle's unified data model gives Tsingtao the wherewithal to make faster, better business decisions.

INVENTORY INTEGRATION AND OPTIMIZATION

Tsingtao's investment included the deployment of Oracle modules designed to integrate and optimize inventory operations. Mainstay found that the move boosted inventory planning operations by 20% because of better integration of inventory activities with its finance and purchasing departments—and across its manufacturing complex encompassing more than 200 product categories and 30 packaging configurations.

Using the system, Tsingtao tracks total inventory over multiple business units and warehouses, with the result that it can keep stocks at optimal levels, move products faster, and deliver fresher beer to customers. One key performance metric: better coordination with production and sales has helped reduce inventory write-off and shrinkage costs, saving an estimated US\$1.8 million annually.¹

Tsingtao managers said the Oracle system helped it standardize and unify more than 80,000 raw material and product codes across 26 production facilities. The standardization, combined with improved visibility, helped the company cut inventory-carrying costs by 30%. Today, managers retrieve production and stock details in seconds compared to an hour (or more) before. The result: Tsingtao delivers products to the correct destinations faster and with minimum handling, ensuring maximum product freshness.

¹ Tsingtao has managed to keep inventory write-offs and shrinkage to less than 0.98% of total inventory value.

// We anticipate significant cost savings from a centralized procurement function and Oracle has enabled us to formalize business processes to focus more on vendor management to drive savings. //

Ms. Quao
Procurement Manager
Tsingtao Brewery

PURCHASING

More accurate and timely inventory data helped Tsingtao plan and execute purchases more efficiently, Mainstay found, shrinking purchasing cycles by 80% (from eight days to one).² The company also consolidated procurement functions,³ pooling more purchases across breweries to gain leverage with suppliers and secure favorable terms. Mainstay estimated the Oracle deployment resulted in a 1% cost savings on production materials, saving approximately \$1.9 million annually.

Tsingtao plans to leverage the Oracle Purchasing platform to develop vendor scorecards to track and rank supplier performance over time⁴ and improve future price negotiations. It also plans to optimize order quantities by purchasing brewing and packaging materials in right-size batches that synchronize with production schedules.

AUTOMATED CONTRACT MANAGEMENT

The Oracle business platform streamlined Tsingtao's sales ordering process, leading to a significant decrease in sales order process time, the study found. Key process enhancements included:

- Shared sales information across business units and sales offices
- Improved customer credit checks
- Instant receipt confirmation and on-line order approval
- Electronic notifications sent to production and distribution departments

On average, Tsingtao accelerated sales-order turnaround by 60%—from an average of 48 hours to 18 hours. At the same time, order accuracy rose to 99% from 90% and on-time shipment rates rose from 90% to 95%.

² Tsingtao utilizes Oracle Purchasing, a component of Oracle E-Business Suite, to manage most procurement activities. Key process improvements included on-line availability of contract and pricing information.

³ Prior to the Oracle implementation, Tsingtao's five main factories did their own purchasing and requisitioning.

⁴ Among other measures, the performance-management system will track targeted-versus-actual quantities delivered by each vendor.

// Oracle E-Business Suite not only provides us with an integrated and scalable business platform, but it gives us best-practice methods and guidelines for running a global enterprise. //

Liu Yingdi
Vice President
Tsingtao Brewery

// With Oracle, we have shortened operational processes in both manufacturing and distribution, enabling our customers to drink the best and freshest beer. //

Xu Haiqing
Director of IT
Management
Tsingtao Brewery

MANUFACTURING

In 2004, Tsingtao added Oracle's manufacturing application (Oracle Process Manufacturing) to its Oracle E-Business Suite platform. According to Mainstay, the manufacturing solution yielded improvements in production planning and execution that are expected to generate annualized savings of US\$3.4 million and result in faster delivery of beer to distributors and customers.

Executives said the Oracle platform provided a "framework of business processes" that Tsingtao could easily incorporate into its unique production environment. Specifically, Mainstay documented the following benefits:

- 80% decrease in time to perform detailed material cost analyses (from four days to one-half day)
- Use of multiple bill-of-materials costing analyses to accelerate "what if" product-development and product-profitability analyses
- Shorter distribution cycles and materials storage times
- Reduction of distribution-related losses (by utilizing direct shipments and faster distribution from plant to customer)
- 20% reduction in re-delivery time, increasing beer "velocity" by 2% and ensuring freshness and consistent product quality

Tighter coordination of demand, raw materials, and available plant capacity had the effect of adding production capacity—about 100,000 tons annually, the study showed—with no corresponding increase in equipment, depreciation or labor costs. The capacity boost means that Tsingtao can push construction of new production facilities several years into the future, avoiding immediate outlays of about \$10 million for new plant, equipment and workers (400 FTEs).

BUSINESS BENEFITS SERIES

ABOUT THE BUSINESS BENEFITS SERIES

This study is one of a series of investigations into the costs and business returns of IT investments, with a focus on Oracle technology and applications. It is intended to serve business executives and managers who are evaluating technology investment options.

Research and analysis for this study was conducted by Mainstay Partners, an independent consulting firm, and was based on interviews with executives at Tsingtao Brewery, review of planning documents, and searches of industry literature. ROI calculations use industry standard assumptions regarding the time value of money.

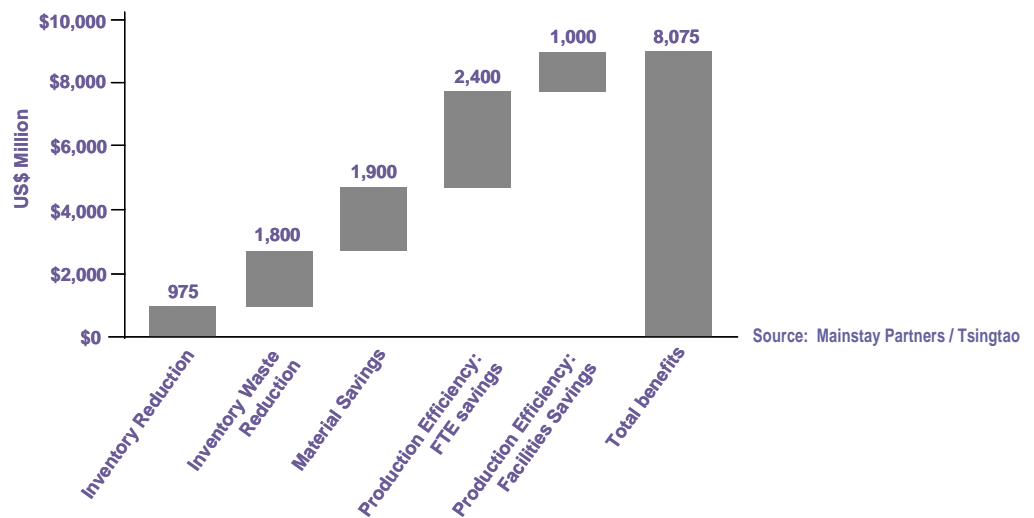
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BENEFITS SUMMARY

Overall, Tsingtao Brewery is realizing annualized benefits of \$8.075 million from its Oracle investment, Mainstay found. Figure 1 breaks down the benefits by savings categories. Over five years, Tsingtao is expected to realize an 82% net return on investment, equating to an internal rate return of 75%. Based on its analysis, Mainstay expects Tsingtao to achieve payback in about 31 months.

FIGURE 1: BENEFITS BREAKDOWN (ONE-YEAR ANNUALIZED SAVINGS)



- **Inventory Reduction.** Reflects 30% reduction in inventory carrying costs
- **Inventory Waste Reduction.** Reflects reduction of inventory write-off and shrinkage costs to less than 1% of total inventory value, representing a savings of \$1.8 million
- **Material Cost Savings.** Improved price and volume negotiations resulted in a 1% cost savings on production materials, saving \$1.9 million per year
- **Production Efficiency.** Optimization of production facility planning resulted in increased availability of production capacity by 100,000 tons annually, with no related increase in equipment, depreciation or labor cost. Savings are split between Facilities (reflecting avoided capital outlays of \$10 million for a new plant) and FTEs (reflecting avoided labor force expansion of 400 employees)