

ERP vs. Best-of-Breed?

Why not both?

Enterprise Resource Planning systems and best-of-breed solutions are no longer an either/or decision.

by Elizabeth Malis, Director, Supply Chain and e-Markets Alliances, PricewaterhouseCoopers

The ERP versus best-of-breed argument has been hotly debated over the last several years. But today, cooler heads are beginning to prevail. Global enterprises seeking to streamline their processes while retaining departmental specialization are now finding it easier to have the best of both worlds.

For many companies, integrating Ariba's eProcurement software with an existing Enterprise Resource Planning (ERP) system is a common undertaking (see *Similar Issues at Royal Bank*). However, in the case of oil and gas giant Texaco, the project was very big, and the stakes very high.

In the fall of 1999, Texaco was about to embark on one of its most ambitious information technology projects – implementing SAP. SAP had become the petroleum industry standard, with other industry leaders such as Shell, BP Amoco, and ExxonMobil already well into their implementation projects. Texaco's goal was to implement SAP's Material Management, Financials, Costing, Asset Management, and Joint Venture Management and Project Systems by January 2001.

Concurrent with the SAP project, Texaco also had a project underway to establish a strategic approach to streamline the management of its supply chain. An eProcurement package was seen as a key vehicle for implementing and sustaining the benefits of future strategic sourcing and process improvement efforts.

To help ensure that their implementation goals would be met, Texaco turned to PricewaterhouseCoopers (PwC) to assist them in these mission-critical implementations.

By October, 1999, teams had been assembled and work had begun to archi-

tect the new SAP system. However, as the project began to build momentum, it became clear that there were some gaps between what SAP could provide and what Texaco required of its new procurement system.

Back to the beginning

Texaco was transitioning from a paper-based system that had no formalized support from any enterprise transaction systems, to a highly integrated Enterprise Resource Planning (ERP) system.

As the material management team began to design Texaco's next generation procurement capabilities, certain fundamental issues began to arise, particularly around catalog content. Because Texaco had no legacy system to support its purchasing process, the company had no material or service catalogs to use as a starting point to build the SAP item master records.

In their search for catalog content, the SAP project team realized that implementing an eProcurement system could be the answer to its problems. After evaluating various business scenarios, Texaco, with the support of the PwC project team, decided to implement the Ariba eProcurement system in conjunction with the SAP project already underway. A number of factors determined the team's decision:

- **Adding Ariba would ensure that Texaco's eProcurement requirements were met** – Texaco was very sensitive to user acceptance issues, and believed that the Ariba user interface and strong search capabilities would ease the dramatic cultural shift that users would experience as they moved from a manual system to SAP.
- **Ariba would help Texaco formulate a content management approach** – Utilizing Ariba would allow Texaco to pursue targeted supplier adoption and to



leverage existing content available through third parties. Also, by using a third-party content manager, Texaco could avoid having to develop content management expertise in house.

○ **Texaco's project team was in place and energized** – Texaco had already selected a systems integrator, assembled the project team and assigned project responsibilities. Adding Ariba would require more resources, but

supply management team of 16 grew to 30. New skills were required both on the technical side, where integration program developers were required, and on the functional side, where eProcurement specialists were added.

Moving forward on two fronts

Once the decision to add Ariba was made, the functional design teams moved forward to re-assess the design decisions made to date, and to architect the solution to include Ariba. Key to that process was the determination that SAP must continue on as the system of record. All master data would be maintained in SAP, but due to Texaco's requirements, the Ariba system also would have current information – the two systems would have to be tightly integrated.

This meant that a completely new process would have to be developed –

including determining where key business processes would reside – leading to the following decisions. Texaco would:

○ **Users could focus on a single system for procurement** – By allowing the project team to access the additional capabilities provided by Ariba up front, initial design and configuration could be done incorporating the Ariba/SAP strategy. This would allow eProcurement users to focus on learning a single system from the start.

○ **SAP and Ariba together would provide transaction infrastructure that would help sustain strategic supply chain management benefits** – With substantial improvements to its transaction processing capabilities, Texaco could ensure that benefits would be sustained from its efforts to reduce maverick spend, improve process conformity and consistently classify spend.

Under the revised mandate, the original

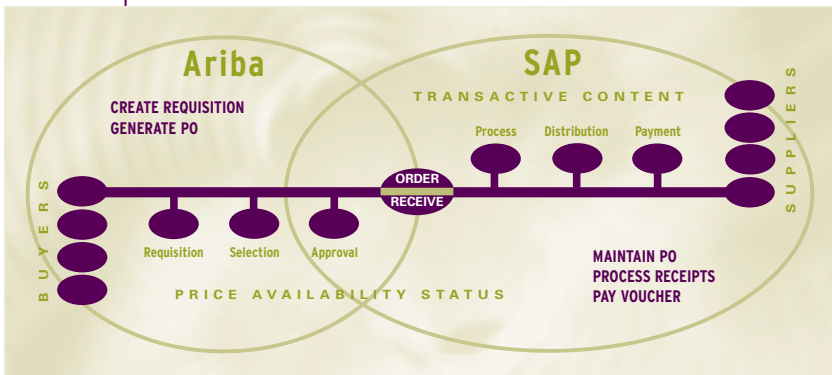
including determining where key business processes would reside – leading to the following decisions. Texaco would:

- Maintain materials catalogs in Ariba because of Ariba catalog management capabilities;
- Construct similar services acquisition processes using services contracts resident in SAP;
- Utilize Ariba to create and maintain requisitions, allowing both requisition change and cancel;
- Implement Ariba rules and workflow to manage requisition approval process;
- Create POs in Ariba but replicate them in SAP with interface programs;
- Utilize SAP goods receipt, invoice and price verification and invoice payment;
- Disable Ariba receiving functionality.

Fine tuning

To support the new product interface

TEXACO ARIBA/SAP INTEGRATION



strategy, the project team focused its efforts on the out-of-the-box adapters licensed with the Ariba product, and determined that most required customization. The Texaco/Ariba system uses 25 SAP-specific adapters to pull data from SAP into Ariba at regular intervals, all of which were modified in the course of this implementation. Some of the master file update adapters are run nightly, while the PO Push and PO Pull adapters, which move the PO information between SAP and Ariba, are run every 10 minutes.

Most of the more complex modifications were driven by functional requirements associated with the tight integration of the two systems. The out-of-the-box capabilities intended to provide an interface between the

capabilities would allow all requisitions to use Ariba as their primary procurement environment throughout the procurement processing cycle, rather than just with the creation of requisitions.

Texaco's requirement to process both material purchase orders and service purchase orders globally also drove system modification. Because services procurement comprises roughly 75 percent of the total spend at Texaco, supporting service purchase orders was an absolute necessity. The systems were modified to allow users to select service contracts from a catalog much like the way they selected material items from vendor catalogs. To provide greater control and promote user acceptance in this area, several defaulters,

actions and validators were developed and implemented to provide the users with easy search mechanisms to find service contract information based on the supplier number, material group or contract group selected by the user.

In addition, many of Texaco's requirements were driven by the company's need for international support. Because some international locations use PC-based solutions such as Solomon Software, for example, the team developed import capability to guarantee that the centralized processing environment would be maintained. Custom fields were also added to the Ariba user interface to collect necessary information for

two systems did not support the requirements of maintaining full purchase order detail and maintenance on both systems. The modified

the freight forwarder, including method of shipment and ship-to address support for international locations.

Key Texaco Project Statistics

Software Implemented:	Ariba 6.1 patch 5/SAP 4.6b, including the first implementation of Change and Cancel PO integration between SAP and Ariba
Master File Statistics:	<ul style="list-style-type: none"> 400 Purchase Orders processed daily 7,200 Suppliers, including 40 on-line catalog suppliers with an additional 250 catalogs in progress 9,300 Supplier Locations 12,000 General Ledger Accounts 27,000 Cost Centers 48,000 Inventory Items 7,400 Users, including an average of 50 concurrently

The project team implemented Ariba Version 6.1 integrated to SAP 4.6b. The production system consists of multiple hosts, including two UNIX hosts and one Windows NT host. The Ariba application is partitioned between the two UNIX hosts with the database resident on one, and a Netscape iPlanet web server and Ariba server resident on the second. To support the integration between the two systems, the team implemented AutoSys, a scheduling software package that manages scheduling and execution of the adapters, SAP Remote Function Calls and catalog loads.

Similar Issues at Royal Bank Financial Group

Last May, Canada's Royal Bank Financial Group was addressing business issues similar to those experienced at Texaco. While Royal Bank also had selected Ariba, its SAP implementation was already in place. Royal Bank had also been an early adopter of strategic sourcing initiatives, and was already achieving significant spend reductions. Implementing Ariba was seen as a means to ensure the preservation of existing savings, as well as to reap additional benefits that included:

- Providing a mechanism to "lock in" the Bank's strategic sourcing agreements with suppliers to improve compliance and achieve business process efficiencies;

- Standardizing bank policies and processes within the organization and leveraging incremental capabilities of an eProcurement solution;

- Creating a single repository for spend data across all business units, improving reporting and analytical capabilities;

- Building eBusiness experience and expertise by providing an improved business process and technology

infrastructure within the Royal Bank supplier network.

Royal Bank also anticipated additional financial benefits:

- Further reduction of rogue spending, with a benefit estimated at 1 percent of expenditure;

- Improved leverage gained via increased volume with strategic suppliers, with a benefit estimated at 1.5

percent of expenditure;

- Shared supplier efficiencies estimated at 1 percent of expenditure.

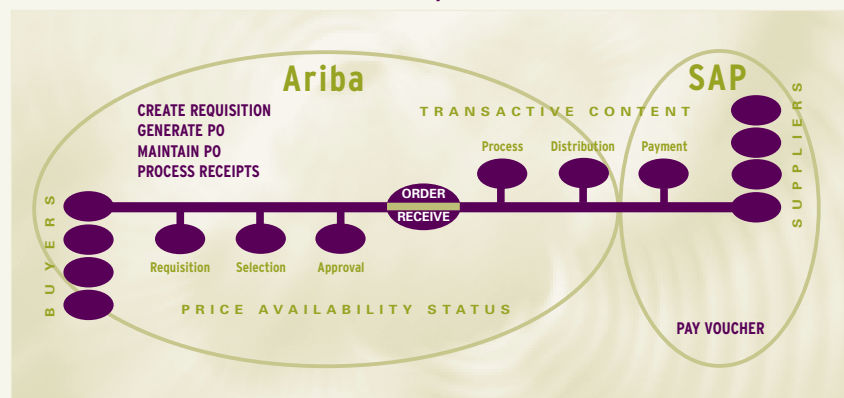
Royal Bank's integration approach

Royal Bank had implemented the financial and human resources modules provided by SAP, and like Texaco, considered SAP the primary system of record. The team maintaining the SAP implementation mandated that there could be no modifications to the SAP system driven out of the Ariba implementation. However, unlike Texaco, any type of receiving or inventory management function had to reside in Ariba, because there was no SAP Materials Management implementa-

Some modifications were required to Ariba to support incremental information requirements, such as maintaining approval limits. Ariba adapters were used on the pull side to extract buyer information in SAP and populate user data in Ariba. Push adapters were used to transfer the matched transaction (purchase order plus receiver information) into the SAP accounts payable function for payment.

By selecting an interface point with a clear defining line between Ariba and SAP, bridging the two systems was kept simple. To support the user and supplier community during its transition to the Ariba system, Royal Bank and PwC implemented a

ROYAL BANK ARIBA/SAP INTEGRATION



tion to leverage. This actually simplified the integration strategy.

Royal Bank determined that it was most appropriate to leverage the full requisition-to-receive business process supported by Ariba. Using this approach, the integration effort was focused at a natural point in the business process cycle that contained the integration investment.

detailed change plan that addressed the needs of all the stakeholders, and managed to that plan. While the plan incorporated the traditional training and communications strategies, the team also determined key success measures and monitored system effectiveness, making sure that no one was left behind on either side of the interface.

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In support of the commitment to provide a flexible environment for its users, the team modified the system to allow users to create non-catalog requisition items if they were available at a different price from what was listed in the catalog, from either the same or a different supplier. This business condition also existed where a catalog was not loaded for a supplier, but the requisitioner knew that the item was available from that supplier. The system was modified to allow the requisitioner to convert a catalog item into a non-catalog item so that the user could enter custom values for the item description, item price, or the new supplier.

Lessons learned

Three fundamental issues evolved out of Texaco's implementation:

1. Change management was key – With any changes in application software strategy, change management would be of utmost importance, keeping retraining and transition for the user community to a minimum. Any challenges associated with a more complex systems implementation project were felt to be smaller than having to put the user community through training and conversion twice for two new systems.

2. Sensible purchasing processes had to be supported – In moving from manual purchasing systems, Texaco had the opportunity to optimize its purchasing processes, reviewing the manner in which all types of procurement were completed. Instead of trying to normalize all procurement processes via a “one size fits all” approach, business decisions were made up front to support material and service procurement. The team was also able to formulate a strategy for purchasing low

value, but high transaction, commodity items where appropriate, without requiring the full receiving/inventory control transaction processing support of SAP.

3. Tight integration did not excuse users from learning SAP – In order to have fully

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knowledgeable users, user training had to include a high level understanding of the entire procure-to-pay business process. By providing the full cycle training, requisitioners creating and updating requisitions are more likely to make better decisions because they have greater sensitivity to any issues that may be created later in the business process cycle.

Application software vendors have seen their ability to deliver and support best-of-breed strategies dramatically improve due to the availability of enterprise application integration products that provide adapters to today's software products. By implementing these tools, the IT function can provide best-of-breed functionality where the business process requirements mandate it, and out-of-the-box integration where more general requirements benefit from the balance of software function and integration. ▲

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