



VALERO ENERGY CORPORATION

VALERO

SAP BUSINESS TRANSFORMATION STUDY

AT A GLANCE

Industry	Oil and gas – refining
Revenue	More than US\$90 billion (2006)
Employees	22,000
Location	San Antonio, Texas
Web Site	www.valero.com
SAP® Solutions and Services	SAP NetWeaver® platform, SAP® Business Suite applications

Valero Energy Corporation is the largest oil refining company in North America. The company’s primary products are reformulated gasoline, California Air Resources Board Phase II gasoline, low-sulfur diesel, and oxygenates. Valero has 17 refineries in the United States, Canada, and Aruba; approximately 5,800 retail and branded wholesale outlets in the United States, Canada, and the Caribbean, and refining capacity of 3.1 million barrels per day.

Key Challenges

- Grow rapidly, primarily through acquisitions
- Quickly achieve acquisition synergies
- Improve decision making information for acquired operations
- Shorten postmerger integration by 4- to 8-fold
- Eliminate duplication of effort and data
- Speed up generation of month-end closing statements
- Attain near total accuracy of performance figures
- Enable viewing of total company inventory at any time

Why SAP Was Selected

- Ability to provide a central hub for managing all interfaces and Web services
- Power to serve as a single integration and development platform for nearly all of Valero’s business
- Capability to integrate SAP® and non-SAP software systems
- Support for synchronous and asynchronous messaging
- Enterprise approach to process integration

Implementation Best Practices

- Standardized on 1 platform for composite applications
- Managed all application interfaces and Web services on central integration hub
- Prototyped tools prior to production rollout
- Established standards for enterprise services

Low Total Cost of Ownership

- Made it quicker and easier to change application infrastructure
- Minimized cost and effort entailed in interfacing disparate systems
- Made Web services reusable

Financial and Strategic Benefits

- Allowed acquisitions to continue without IT gridlock
- Expanded access to Web and enterprise services
- Achieved consistency in methods for using services
- Improved information for making business decisions
- Provided real-time visibility of orders, shipments, and inventories
- Increased collaboration among in-house developers
- Increased system reliability and reduced complexity

Operational Benefits

Key Performance Indicator	Impact
Time to develop new enterprise applications	-30%
Number of Web services needed	-75%
Demurrage costs	Saved US\$480,000 in the first month with “Ship Visibility” application





“There’s a terrific opportunity for companies to use SAP’s application of enterprise service-oriented architecture to achieve speed and efficiency while eliminating duplicate work and duplicate data.”

Hal Zesch, Senior Vice President and CIO, Valero Energy Corporation

“Now we have plantwide visibility of anticipated work, how the resources are going to be used, and what the anticipated costs will be, all the way down to the unit.”

Rick Griffin, Vice President, Refinery Systems, Valero Energy Corporation

Valero – A Proven Track Record of Growth and Integration

Over the last decade, Valero Energy Corporation has leaped to become the largest oil refinery company in North America by pursuing an aggressive growth-through-acquisitions strategy that targets distressed companies. Valero went from one refinery in 1997 to 17 today, from 0.2 million barrels a day in refining capacity to 3.1 million, and from US\$5 billion in revenue to more than \$90 billion.

Managing this growth, especially the assimilation of new companies into the corporate fold, is a monumental undertaking. One of its most challenging aspects was the integration of the many disparate IT systems that new acquisitions bring with them. The new entities all had applications that were ill equipped on their own to communicate with one another or with the SAP® application suite that runs Valero’s core business. Moreover, they had to be integrated quickly because most of the acquired companies were distressed assets that were acquired at low costs. IT integrations that take most companies 12 to 24 months must be completed by Valero in three.

SAP NetWeaver®: A Single Hub for Integrating Applications and Processes

To keep IT gridlock from impairing its growth, Valero needed a way to fit new applications into the infrastructure quickly. The only solution was a common hub for integrating them, whether they were local or global in scope and from SAP or other vendors – a hub that would support reliable communication among both synchronous and asynchronous applications. But just connecting applications was not enough; it was equally important to make sure they were used properly. Therefore, this hub had to support centralized monitoring of business processes,

orchestrating them end to end and making them easy to change. In the SAP NetWeaver® platform, especially the SAP NetWeaver Exchange Infrastructure component, Valero found exactly that solution.

Building Enterprise Services and Web Services on Valero’s Enterprise SOA

To make sure users had convenient access to the functions these applications perform, Valero built a layer of Web services specific to business applications, along with a layer of enterprise services above them to orchestrate company-wide processes. Here too SAP NetWeaver proved to be an excellent platform, serving as the basis for Valero’s enterprise service-oriented architecture (enterprise SOA) upon which it has developed over 50 integrated, reusable Web services that replace 200 stand-alone Web services. Hundreds more are in the offing, all available from a single dashboard. This new breed of enterprise applications is far less time consuming to develop – two weeks compared to six months in some cases – and can be more easily reused.

Continuing on the Growth Plan

Valero’s enterprise services and integrated IT infrastructure have allowed the company to improve business efficiency, on-time reliability, and performance tracking accuracy while cutting time to bill, time to close, and maintenance and support costs. A single “Ship Visibility” application saved Valero US\$480,000 in demurrage costs in its first month of use. Most important, Valero is continuing its rapid pace of acquisitions and integration of disparate IT infrastructures far faster than the industry norm.

Next, the company is turning its attention to the supply chain to increase the efficiency of collaborating with suppliers. Meanwhile, it is proceeding on plan with confidence that SAP NetWeaver and the enterprise services model will continue to simplify the challenges of growth.