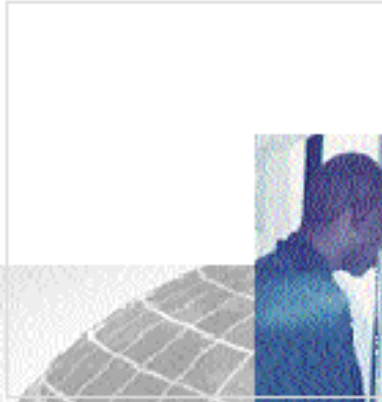


**Oracle Solutions for the Chemical Industry**  
Profit in a Complex Environment



## PROFIT IN A COMPLEX ENVIRONMENT

Is your chemical operation positioned to prosper in the months and years to come? Economists predict upswings and downswings for the chemical industry, but world-class chemical operations prove profitable despite shifts in economies, commodity prices, and trade policies. Information and adaptability are the keys to that success.

Today's chemical industry is characterized by fluctuating prices, process variability, and strict industry regulations. As a result of mergers and acquisitions, chemical companies have been among the first to encounter the challenges of managing a global organization, operating widely dispersed production plants with multiple languages, currencies, and regulations. Furthermore, chemical organizations are trying to balance growing economies of scale with the demands of personal customer relationships. There is an increased need to focus on delivering exactly what the customer requires while minimizing development, production, and transportation costs. Ultimately, chemical organizations are becoming more lean and agile.

Oracle solutions for the chemical industry are designed to simplify information delivery, lower the cost of information management, and handle rapidly evolving requirements. They can help your organization implement business process flows that are fully integrated, streamlined, and based on industry best practices. Oracle's integrated solutions provide a global view of your business, with centrally managed and available data, allowing you to break down traditional barriers to accessing essential business information. You will be able to deliver timely, relevant information to all areas of your business for accurate and proactive decision-making at the strategic and tactical levels.

With Oracle you make the best use of available resources while delivering products that meet customer demand and improve customer satisfaction.

“In the past, for every order, purchase, manufacture, shipment, billing, and collection, we had to input each separate activity into a different database, making it necessary to reconcile everything on a daily and monthly basis. Now those databases have been consolidated. As soon as a customer request is received, everything from purchase of materials to employment of resources needed for production to the actual production itself is relayed instantly to every division, making it possible to deliver products more quickly and accurately to the customer.”

— BYUNG-ROLEE  
DIRECTOR OF ERP  
Hyosung Conglomerate

## ACCELERATE RECIPE DEVELOPMENT

Many new chemical products are quickly imitated, rapidly losing their unique market value and profitability. Time after time, competition drives down margins. As a result, innovation is critical to your prospects for success. In addition, many chemical operations face high variability in raw material inventory, forcing quick formula adaptations to maintain production quality within specifications. Finally, as end users and customers return performance details, customers require closer and closer collaboration with chemical operations to constantly improve products. Oracle Process Manufacturing solutions deliver a powerful and adaptable platform for driving faster product launches and keeping trading partners in sync with the ever changing requirements of the chemical marketplace.

Businesses that rapidly respond to shifting market requirements will always be one step ahead of their competitors. Oracle Process Product Development provides the tools for introducing a new product, cannibalizing an old one, anticipating demands early, and responding to them instantly. Oracle’s solutions for the chemical industry streamline recipe management, from concept to commercial production, with internet-based formulator and process engineering workbenches. Oracle chemical solutions integrate material data safety sheet (MDSS) development into the product development lifecycle, to help you rapidly and flexibly respond to product changes.

Chemical companies with proven best practice operations use Oracle Process Manufacturing with e-signatures to comply with U.S. Food and Drug Administration (U.S. FDA) and corporate standards for approval authorization. Change management control and standard approval workflows improve speed and accuracy. Chemical industry leaders use Oracle to simulate product costs, product composition, and analytical parameters to more rapidly and efficiently handle evolving requirements.

“Oracle Process Manufacturing has improved quality control, increased productivity, and driven down the cost of process manufacturing at every stage, from the purchase of raw materials through to shipment of the final product. It is an excellent tool that gives medium-size companies complete process manufacturing functionality and the scalability to expand and adapt in a competitive environment.”

— STEVE WILLIAMS  
VICE PRESIDENT, FINANCE  
Warwick International Group Limited

## DRIVE EFFICIENT PLANNING AND PROCUREMENT

Globalization and competition are driving companies to produce for the lowest total cost. Supply and demand volatility and poor visibility into total purchases, plus complex and overlapping procurement activities all compound the difficulty of lowering costs. Leading chemical organizations simplify and consolidate the entire process, by improving the responsiveness of their procurement systems. Moreover, streamlined procurement processes can help build the confidence of employees, customers, and stakeholders as the organization proves that it can procure for maximum service with maximum profits.

Oracle chemical solutions provide tools that enable chemical operations to consistently procure the best-value materials and services, using unified internet-based sourcing tools and streamlined support for complex negotiations. Procuring the best-value materials and services originates from good forecasting of qualified orders. It continues with workflow-based processes that allow planners, inventory managers, and procurement staff to cooperate from demand to requisitions and on to procurement and payment processing. And it ends with customers that are served on time with the lowest-cost products that still allow profitable operations across the value chain.

Further up the value chain, Oracle helps chemical operations identify savings and supplier improvement opportunities with integrated spending, supplier performance analysis, and transparent portal-based management reporting. Proven Oracle collaboration technologies extend Oracle Process Manufacturing’s capabilities to suppliers, which can take advantage of portal access for transactions that incorporate real-time notifications and XML messaging. More than electronic data interchange (EDI), Oracle helps you provide chemical information that is descriptive as well as transaction-related.

“Oracle Process Manufacturing is designed for process manufacturers. Some conventional or discrete enterprise resource planning applications don’t have all the needed features. So over the years, we’ve been able to appreciate that these features are designed up front in Oracle’s products.”

— MARCO ANTONIO GONÇALVES BRASIL  
ASSESSOR OF INFORMATION  
TECHNOLOGY  
Politeno

## OPTIMIZE MANUFACTURING

Manufacturers face increasing customer demands and more restrictive environmental conditions, while they are also being asked to produce at higher efficiency levels.

Getting the right product to the right customer at the right time is important to the success of your business. Typically, the autonomy of supply chain environments means holding unnecessary inventory to help ensure the ability to meet demand—products that may prove unnecessary are planned for, which causes many types of inefficiencies.

Oracle’s solutions for the chemical industry enable you to see a consolidated view of your global business environment. Being able to optimize inventory by location and quantity across your supply chain and execute according to constrained plans will help you eliminate waste and inefficiencies throughout your business and become leaner. You can then effectively plan for what the customer wants, model production requirements to target specifications via computer-aided formulation, and optimize your manufacturing units to make the right products in a timely manner for greater profitability.

Oracle solutions offer flexibility and compatibility with the evolving needs of chemical manufacturers. Oracle’s functionality for the chemical industry enables manufacturing optimization through rules-based recipes to accommodate production variability; step-level management for iterative real-time adjustments; constraint-based scheduling; directing manufacturing through sourcing and transfer rules; planning and executing to product, batch, and warehouse rules; mobile supply chain support; process control integration; and much more.

“Oracle E-Business Suite gives us the technology to help us make the best business decisions, maintain a lean cost structure, work well with our partners, and set our sights on future development.”

— DANIEL GRONDIN  
DIRECTOR OF SYSTEMS DEVELOPMENT  
SICO Inc.

## MAXIMIZE ASSET UTILIZATION

The production plant is the heart and soul of every successful chemical manufacturer. Few would argue with the importance of ensuring reliability within the production operation. Unplanned asset downtime can be crippling to the bottom line, and equally important is the operating efficiency of the plant.

Maximized asset utilization through increased on-stream efficiency, improved mechanical integrity, and streamlined maintenance operations are just a few of the performance factors that require the acute commitment of operations managers. Oracle Enterprise Asset Management can help you maximize asset utilization, by supporting disciplined maintenance processes and regimented service schedules that minimize planned downtime, avoid unplanned downtime, and prevent accidents.

Oracle’s solution allows users to view availability and plan accordingly for resources that are used by operations. Most important, the Oracle applications are designed for the maintenance users who actually perform the work. Oracle Maintenance Management delivers self-service capabilities that allow tradespeople and supervisors with minimal training to easily request, issue, and close work orders. As a result, improvement programs can be enforced and reviewed by your organization to ensure compliance with industry standards and internal corporate performance metrics.

“H.J. Baker & Bro. was looking to find an enterprise resource planning and outsourcing partner that could not only handle the complexities of a multidivision company but could also help us transform our business in the process. Oracle’s vision and industry-specific functionality will help our company move to the next level.”

— CHRISTOPHER V.B. SMITH  
PRESIDENT  
H.J. Baker & Bro.

## ATTRACT AND RETAIN CUSTOMERS

Apart from prices, players in the chemical industry also compete on product quality, credit terms, and technological support for buyers.<sup>1</sup> In addition, chemical companies are subject to demand fluctuations and price volatility, due to economic factors and overcapacity resulting from overinvestment during growth periods. To maximize profits during periods of growth or stagnation, chemical industry executives need to control those factors they can most directly influence, such as customer service. Industry leaders have learned that developing a solid customer base takes a long time. Tighter competition and higher customer expectations make customer focus and value-added services true differentiating factors.

Oracle can help you maximize every opportunity you have to attract and retain customers, starting with the demand creation process. Oracle Marketing enables organizations to launch sophisticated lead generation programs that improve customer targeting, utilize multiple communication channels, and deliver measurable results. Likewise, Oracle Sales maximizes each sales channel’s ability to convert leads into customers. Once relationships are created, Oracle Sales and Oracle Customer Relationship Management can help you manage the entire range of order-related issues, from unique product-quality specifications to customer-specific pricing policies. Finally, Oracle Service lets you ensure that your customers receive the optimal level of support to improve satisfaction.

<sup>1</sup> ICRA Sector Analysis, April 2004

“We believe that we now have a technology-based tool set that will carry us well into the future regarding the collection, processing, and reporting of core business data. With Oracle we have a long-term technology partner. By implementing different modules from Oracle E-Business Suite that are relevant to our business, we have positioned ourselves for the future. We know that that is going to equate to dollars in our pocket in the future in terms of cost and head-count containment.”

— DAVID LUMMUS  
DIRECTOR OF MAINTENANCE  
Texas Petrochemicals LP

## ENSURE GOOD GOVERNANCE AND COMPLIANCE

The best-run chemical companies have long endorsed sound corporate governance practices. Good governance practices instill confidence and provide assurance that an organization’s financial statements are reliable and that transactions have been conducted fairly, transparently, and consistently—without conflicts of interest. However, financial reporting is only the final result of good governance. Sound governance practices must also encompass proven operational procedures and workflows with detailed accountability across operations, leveraging information systems that enable full disclosure. Similarly, effective regulatory compliance requires end-to-end integration, so that the required information is captured, stored, and tracked along with each process as needed.

Only a single, complete data model serving applications across the entire enterprise—from customer relationship management and supply chain management to core enterprise resource planning, accounting, and production systems—can most effectively provide the timely, comprehensive performance management information critical to good governance. Oracle offers mature, market-leading solutions for governance and compliance that are based on Oracle’s unique information architecture—a single, unified data model that stores information across a full range of applications and an integrated reporting infrastructure that lowers costs and minimizes the chance of data errors. Unified data gives you the information integrity required to develop compliance and financial management practices that ensure control by meeting evolving multinational compliance and enterprise risk management demands, boost the efficiency of compliance investments, and achieve the visibility necessary to deliver better business performance. Thus, your management, directors, and internal auditors are well prepared to participate in answering the toughest questions effectively and efficiently, in an active and constructive manner.

## SUMMARY

As chemical companies look to effectively respond to variable market conditions, emerging opportunities, an increasingly global landscape of supply and demand, and a continuously evolving regulatory environment, a critical component of a successful strategy is to partner with a solutions provider that enables them to build disciplined, yet flexible, business processes with increased enterprise visibility, control, and efficiency. That partner is Oracle.

Oracle can help increase visibility into data that is fragmented by point solutions and geographical or divisional obstacles, so you know more about your business and can make more-informed decisions faster. Oracle can help increase the productivity of your business operations with complete automation, connected business processes, and collaborative technologies. Oracle can help you simplify your systems so you are well positioned to grow and profit, despite shrinking budgets and fewer resources.

For more information about Oracle solutions for the chemical industry, please visit [oracle.com/industries/chemicals](http://oracle.com/industries/chemicals) or contact your local Oracle representative at +1.800.ORACLE1.

### **Oracle Corporation**

#### **World Headquarters**

500 Oracle Parkway  
Redwood Shores,  
CA 94065  
U.S.A.

#### **Worldwide Inquiries**

Phone +1.650.506.7000  
Fax +1.650.506.7200  
[oracle.com](http://oracle.com)

Copyright © 2005 Oracle. All Rights Reserved. Published in the U.S.A.

This document is provided for information purposes only and the contents hereof are subject to change without notice. This document is not warranted to be error-free, nor subject to any other warranties or conditions, whether expressed orally or implied in law, including implied warranties and conditions of merchantability or fitness for a particular purpose. We specifically disclaim any liability with respect to this document and no contractual obligations are formed either directly or indirectly by this document. This document may not be reproduced or transmitted in any form or by any means, electronic or mechanical, for any purpose, without our prior written permission.

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.