Achieving Automotive Supplier Excellence: Flawless Delivery Execution

ORACLE

Achieving Automotive Supplier Excellence: Flawless Delivery Execution

"The ability to deliver goods on time is becoming an increasingly critical success factor among manufacturing plants. For one, businesses are outsourcing more of their manufacturing activities to partners that can perform those activities at much lower costs. In order to achieve leverage or economies of scale in procurement, businesses are pruning their supplier bases. In both cases, businesses are choosing the most reliable suppliers—those that can provide the best on-time delivery performance."

IndustryWeek.com June 19, 2001
(From a *Viewpoint* article based on results of the Fourth Annual IndustryWeek Census of Manufacturers)

PLATFORM GLOBALIZATION COMPELS CHANGES IN AUTOMOTIVE SUPPLY

Global vehicle production for 2002 was near an all time high[1] and is expected to increase in the decade ahead. Yet original equipment manufacturer (OEM) sourcing managers are looking for fewer strategic supply partners to help meet the anticipated rise in demand. By developing long-term relationships with fewer suppliers, OEMs hope to realize substantial cost savings and create advantageous new relationships for engineering, contract negotiations, and more. By developing global vehicle platforms that use common parts across a number of vehicles and by working with fewer suppliers to support them, OEMs can greatly reduce per unit development and manufacturing costs.

As a result, a fewer number of suppliers are becoming responsible for successful delivery of a greater percentage of the vehicle content in every market, globally, that a vehicle is sold. Clearly, the competition is fierce for a fewer number of platforms among a shrinking supply base. Certain core supplier competencies, such as an excellent record for delivery execution, will become the critical criteria OEMs use to narrow their choice of strategic suppliers.

Information technology is the linchpin of developing supplier competencies such as delivery execution. Oracle provides proven business applications that support the unique delivery execution needs of automotive suppliers with complete functionality, open standards, and flexible capabilities that will evolve along with industry processes.

"The integration of all demand channels has emerged as a crucial concern for the enterprise. To respond quickly to changing customer requirements, order management systems must capture and effectively disperse customer intelligence throughout the supply chain and thereby bridge demand and supply."

Aberdeen Group, Inc. *Order Management: Integrating E-Business Demand and the Supply Chain*, January 2000

ADVANCES IN AUTOMOTIVE MANUFACTURING CHALLENGE SUPPLIER DELIVERY EXECUTION

The automotive supply base entered the last decade faced with a myriad of challenges in almost every aspect of the business: OEMs swiftly recognized that their success hinged on developing lean, agile supply chains that meet complex production delivery requirements. Automotive suppliers have been expected to respond accordingly and are incented to comply with stringent trading partner guidelines, such as MS-9000, which defines fundamental materials management

[1] Ward's Automotive Reports

system expectations. Results of non-compliance will cause unfavorable supplier ratings, loss of vehicle manufacturing customers, financial penalties, and lost opportunities to bid on future vehicle programs.

DELIVERY EXECUTION IS THE CRITICAL MEASURE OF A SUPPLIER

The number of automotive assemblers is limited. Competition for their business is fierce. An OEM's most critical measure of a supplier is delivery execution: The right parts in the right quantity, at the right time, delivered to the right point of usage.

Missed component deliveries could cause serious disruptions in vehicle production, costing the OEM thousands of dollars for every minute the production line is down. OEMs' increased focus on lean manufacturing and just-in-time (JIT) practices have forced suppliers to perfect their delivery execution to the point of complying with customer orders that specify delivery in terms of hours and minutes, rather than days.

Successful Delivery Execution Hinges on Comprehensive, Integrated Information Systems

The mergers and acquisitions that have taken place within the supply base have enabled suppliers to broaden their customer base, providing some level of cushioning from the loss of any particular customer. However, earning the business of a larger number of customers further underscores the need for suppliers to effectively manage large volumes of data to avoid late delivery charges, premium freight expenses, costly packing and re-packing handling costs, or excessive OEM delivery discrepancy reports (DDRs). Additionally, suppliers must be able to manage a regular flow of changes to manufacturing schedules and quantities, as well as comply with other mandates, such as special packaging, container, and labeling requirements.

To maintain delivery excellence, suppliers must cultivate information systems that are comprehensive, scalable, secure, and integrated. Their business applications and technology solutions must support their efforts to drive out costs and inefficiencies, while remaining flexible enough to evolve with industry practices.

Oracle's highly integrated and flexible applications provide automotive suppliers with the capabilities necessary to quickly improve delivery execution while eliminating inefficiencies and preparing for future growth.

Current Automotive Supplier Technology: Highly Customized and Diverse Systems

The automotive industry has pioneered the use of technology to increase the level of communication between OEMs and suppliers. For example, electronic data interchange (EDI) was adopted as an industry standard in the 1980s. Suppliers have successfully used EDI to more tightly integrate customer schedules with their internal production planning and ERP systems. However, as new production planning systems have been developed, such as sequenced production schedules, the need for increased sophistication in messaging has emerged. Over time, EDI has grown in complexity as OEMs introduced unique production systems, such as Toyota Production System (TPS) and Ford Production System (FPS), resulting in OEM-unique adaptations within the established standards. This has created complex and costly projects involving integration of the suppliers' internal release to cash business processes to each OEM's evolving and unique production systems.

Data Misinterpretation and Delays: A Major Nightmare

Effective data exchange between automotive trading partners, OEM to Tier 1 or Tier 1 to Tier N, can significantly enhance operational and financial performance. Unfortunately there are multiple barriers in realizing these benefits, including information lag, data misinterpretation/translation, and process inefficiencies. Symptoms indicating problems include missed delivery schedules, excessive administrative/expediting costs, or large numbers of DDRs.

Information lag is when the flow of information is delayed. Typical causes include: manual processes, non-integrated systems, or infrequent batch system updates. Data misinterpretation or translation problems occur when trading partners don't completely agree or uniformly apply the data exchange standards. Data communication process issues arise due to many factors, including poor integration among systems within companies, inefficient manual processes, and poor data exchange linkages among companies.

Many companies have realized significant operational improvement by reengineering and automating business processes related to information exchange and trading partner collaboration. Improving the quality and timing of information flow has enhanced their ability to respond to the dynamic changes of the automotive business environment. A key role of newer technology is to ensure that schedule information from multiple customers in multiple regions with various production systems can flow accurately and consistently into a supplier's internal business systems to streamline processes and make it easier to react quickly and efficiently to critical changes.

ORACLE E-BUSINESS SUITE APPLICATIONS SIMPLIFY PROCESSES, STANDARDIZE AND CENTRALIZE INFORMATION

Oracle business solutions for delivery execution are built on a single, unified data model that stores information across a full range of applications. You can maintain an efficient flow of information and a single view of customers, products, and schedules, so that everyone is accessing consistent, timely, and accurate data.

Oracle delivery execution solutions leverage the Oracle E-Business Suite (OEBS) architecture. OEBS—the first and only set of applications to work with a single global database—allows you to connect and automate the entire flow of business processes across the back and front office. This gives you the basis for complete, consolidated information, such as release schedules, inventory levels, and revenue across all lines of business, products, and geographies. Plus, there's no more waiting for data to pass through a separate data aggregation and analysis system. Executives can get daily business intelligence that reveals the state of your business relative to past, present, and projected performance metrics so they can drive profitability daily, not just once a month or once a quarter.

CRITICAL CAPABILITIES TO SUPPORT A SUCCESSFUL DELIVERY STRATEGY

Automotive suppliers seeking to become the strategic partners of choice for OEMs must work to develop critical technological capabilities to support delivery execution excellence.

Oracle believes that world-class supplier delivery performance can be achieved with business applications and processes that can drive out costs, eliminate inefficiencies, and increase focus on customer service issues, such as delivery execution performance, to increase top line revenue.

Complete and Integrated Business Processes

Supplier delivery excellence begins with having up-to-the-minute customer demand visible to the all areas of the organization for planning and execution of downstream operational activities, including manufacturing planning, vendor scheduling, production, shipping, and warehousing. Companies that lack current and accurate information spend countless hours manually directing operations that ultimately result in out-of-pocket expenses, such as premium expediting. Schedule changes from customers, such as sequenced ship schedules, must be communicated in near real-time to shipping locations so that current customer documents are processed with enough time to avoid disrupting vehicle production schedules.

To meet the challenges associated with changing customer schedules, Oracle supports a complete and integrated business process flow associated with the

cross-organizational functionality and activities involved in carrying out an order from release to cash.

The Release to Cash Business Process

The ideal release to cash business process optimizes the interaction among operational and financial processes, such as release management, order management, warehouse management, and accounts receivables. When a release to cash business process is unstable or incomplete, the other areas of the business associated with it are at risk.

Oracle offers a complete solution that ties together the processes associated with the flow of a transaction from release to cash and allows you to improve your effectiveness in each area.

Oracle Release Management: Planning, Shipping, and Sequence Schedules

A mass customization environment drives the need for supply chain agility and adaptability. As a supplier, you must quickly accommodate and respond to high-volume, highly complex, and ever changing demand while supporting pricing and trading-partner-specific mandates, or otherwise jeopardize your supplier rating.

With Oracle Release Management, you can streamline and automate the release management cycle while supporting trading-partner-specific requirements. Oracle Release Management addresses common and mandatory business requirements within the automotive industry, providing a flexible, integrated, and agile solution to help you:

- Handle trading-partner-unique requirements
- Automate the release management process
- Manage and respond to exceptions
- Support sourcing initiatives
- Support cumulative accounting
- Handle complex pricing structures and initiatives

Oracle Release Management Supports Comprehensive Electronic Messaging

Oracle Release Management leverages the Oracle E-Commerce Gateway to manage high-volume electronic collaboration between you and your customers. With the standards-independent features of the Oracle E-Commerce Gateway, you can process incoming and outgoing EDI transactions based upon any standard, such as EDIFACT or X12 format. In addition to being standards-independent, Oracle E-Commerce Gateway is translator-independent. This enables you to leverage your existing investment in an EDI translator, or choose

the translator package of your choice, providing you the flexibility and opportunity to use the translator that best complements your business model.

Because today's electronic communications not only demand a strong EDI capability, but also advanced technology to support customers who do not use EDI, Oracle provides you with a new and robust XML solution. Using the Oracle XML Gateway, you can process XML planning and shipping schedules into Oracle Release Management in the same way you process your EDI schedules.

Oracle Order Management

The integration of multiple demand streams has emerged as a crucial concern for automotive enterprises. To respond quickly to changing customer requirements, order-management systems must capture and effectively disperse customer demand information throughout the supply chain and effectively bridge supply and demand.

Oracle Order Management provides a single order bank for all customer demand, including release schedules from release management as well as from all other sources, such as spot buys for service and aftermarket sales orders. Orders delivered via phone, fax, or other paper-based order methods can as easily be processed as those received electronically. Customer service employees utilize a common look and feel for viewing, analyzing, and processing all types of customer demand received from a variety of sources—in different formats—saving valuable time that can be used for exception management. The integrated applications also make it much easier to quickly and efficiently make manual adjustments to instructions already in the system, such as overriding EDI information per telephoned request.

Oracle Warehouse Management with Direct Shipping

No two warehouses are alike. Even plants or divisions within the same automotive enterprise run their warehouses differently, to take advantage of operational efficiencies intrinsic to their specific operation. Satisfying these unique requirements requires a dynamic, user-defined configuration of customer- and business-specific requirements, such as those that can be developed using Oracle's WMS flexible rules engine.

Applications architectures that support unique container bar codes and other customer-based shipping documents greatly reduce the waste associated with packaging and staging finished good materials. Accurate advance ship notices (ASNs) are more easily created when bar code scanners are designed into the business applications. Oracle's WMS engine supports enormous variation and sophistication in key WMS processes, such as pick-and-put-away logic, task assignment, label printing, and cost-account assignment—without the need to modify code.

Automotive suppliers who have adopted lean operational systems have found value in tightly integrated links among manufacturing processes and the shipping execution processes. Sequence suppliers that pack and ship parts in exact order to a customer's sequence schedules can gain efficiencies by integrating the shipping instructions received from customers with manufacturing and packaging operations. This eliminates the extra costs associated with material handling and repackaging.

Oracle Receivables

Automotive executives require increased access to real-time financial data to ensure that their operations have resulted in timely revenue collection. With Wall Street's increased attention to financial operations, it is important that automotive enterprises remain focused on maximizing profitability and generating value for themselves and their shareholders. Accordingly, a sound receivables system can help to ensure your cash position remains strong and that your operations are ready to meet your capital needs.

Suppliers cannot afford manual processes that integrate shipping and invoicing. Additional charges such as tooling, charge backs, freight, and special packaging must be managed efficiently and seamlessly. Making sure every shipment has an accurate and timely invoice allows suppliers to focus on making and delivering parts while being confident that financial transactions are properly managed.

Oracle Receivables, an invoicing and collections management application, streamlines your release to cash process while providing strong financial controls and strategic financial information. Automate and streamline routine accounts receivables processes, such as invoicing, tax calculation, receipt application, collections, and revenue recognition to dramatically reduce settlement cycle times and lower administrative costs. Capitalize on global opportunities with capabilities such as cross-currency receipts, global enterprise tax calculation, and bills of exchange accounting.

CONCLUSION

If a supplier is good at everything but delivery, that supplier will eventually be replaced.

In a recent report sponsored by the Japanese External Trade Organization (JETRO), supplier selection criterion was examined.[2] The primary criteria in supplier selections were capabilities in part-design, development, and engineering. However, the manufacturers second-most mentioned selection criterion was delivery reliability and global presence.

[2] OEM Parts Purchasing: Shifting Strategies University of Michigan Office for the Study of Automotive Transportation January 2001

Information technology is the linchpin of developing supplier competencies such as delivery execution. For suppliers seeking to achieve flawless delivery execution, Oracle offers a highly integrated infrastructure uniquely suited to streamlining processes across front and back office functionality to ensure unmatched connectivity among manufacturers and suppliers.

Oracle provides proven business applications that support the unique delivery execution needs of automotive suppliers with complete functionality, open standards, and flexible capabilities that will evolve along with industry processes. Oracle's highly integrated and flexible applications provide automotive suppliers with the capabilities necessary to quickly improve delivery execution while eliminating inefficiencies and preparing for future growth.

The Next Step

To discover how Oracle Corporation, the world's leading supplier of enterprise technology and applications software can improve your organization's delivery performance, and optimize other automotive value chain processes, visit www.oracle.com/industries/automotive or contact your local Oracle representative.

Achieving Automotive Supplier Excellence: Flawless Delivery Execution
January 2003
Author: Paul Hebeler
Contributing Authors: Sujith Abraham, Kathleen Gahan, John P. McGlynn

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
www.oracle.com