



SAP White Paper



TRANSPORTATION MANAGEMENT IN A CONSTANTLY TRANSFORMING BUSINESS

Keeping Pace with Innovation and Globalization

THE BEST-RUN BUSINESSES RUN SAP™



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EXECUTIVE SUMMARY

Supply chain management has come to the forefront of every company's business agenda. Responding to the demands of today's highly competitive global environment, traditional linear supply chains with their sequential processes are evolving into complex, global business networks that are highly responsive to customer needs.

In turn, the fulfillment processes have become critical supply chain components to achieve this business network transformation. Fulfillment is where professionals in sales, customer service, accounting, global trade management, warehousing, and transportation collaborate in supporting an ever-increasing, dynamic business network of shippers, carriers, and logistics service providers (LSPs). The goal is to manage the movement of materials, products, information, and finances in the most cost-efficient manner possible while profitably meeting the requirements of their customers: simple in concept, yet complex to plan and execute.

It is widely believed that a strategy to achieve efficiency in transportation can yield high rewards. However, when this is part of a larger fulfillment strategy, the yield is even greater. "Globalization, outsourcing, and shrinking cycle times are adding risk, cost, and complexity to transportation operations," says Adrian Gonzalez, director of the Logistic Executive Council, ARC Advisory Group. "Companies that take an end-to-end, process-centric perspective will achieve greater financial and operational success. Companies must recognize that transportation management does not exist in a vacuum; it's a process that interfaces with a variety of other business functions, including order management, purchasing, warehouse management, customer service, and financials."

Transportation management at a global level must support adaptable business processes that are easy to manage. Adaptable processes can also connect with the information chain (for example, supply chain event management, freight costing, and scorecards of compliance with service-level agreements) for improved, automated collaboration with partners, suppliers, and customers. They can enable global capabilities via multimode planning of activities for air, ocean, rail, road, parcel, and postal transportation modes.

Many companies deal constantly with challenges of cross-enterprise transparency and communication within their fulfillment environment. They usually have multiple systems that do not necessarily talk to each other across the entire business process. Enterprise service-oriented architecture (enterprise SOA) enables the necessary cross-enterprise collaboration with customers, suppliers, and business partners via enterprise services that are based on broad industry standards and global data types. Enterprise SOA is a benefit to the transportation environment from both a technology perspective and from a business process point of view.

Transportation is a key part of the holistic supply chain and logistics strategy that is, in many ways, a part of larger processes such as order to cash and procure to pay. In choosing a solution, companies must now consider not just functionality and features but also how well the solution interacts within the larger business network.

The role that a company plays within transportation is a key factor; it may be a shipper, an LSP, or a combination of both. Just as the use of transportation services differs greatly from company to company, so does the degree of complexity for the solution. The complexity level is especially high for the many companies with disparate system landscapes.

Many LSPs are currently burdened with aging proprietary systems and a high level of complexity for integration. These companies usually have large internal IT departments mostly comprised of legacy and best-of-breed systems. These systems evolved through necessity due to the unique requirements that were not available in the applications of the time. In many ways, LSPs are now at the same point shippers were 10 or 15 years ago. For an LSP, visibility across the enterprise is difficult at best.

On the other hand, in the manufacturing, distribution, and retail shipper markets, the driving forces are simplification of system landscapes and interoperability; this is becoming more necessary as companies recognize the business process complexities they need to support. Enterprise resource planning (ERP) applications have been adding a lot of value to these efforts, and for the first time, companies implementing these tools have complete online and real-time visibility across multiple divisions and departments, even on a global basis.

In today's transforming business network, LSPs and shippers are very dependent on each other. The fulfillment networks between them must go beyond simple dependency toward synergy, and business activities will have to work toward eliminating data redundancy and inefficient, unnecessary process steps.

KEEPING PACE WITH TODAY'S TRANSPORTATION ENVIRONMENT

Commercial transportation has become a very complex process. Raw materials, parts, and finished goods must move from point to point along a supply chain of shippers and logistics service providers. Companies in the huge transportation industry must have fast, streamlined, and profitable business processes to satisfy their demanding customers' logistics needs. These processes, supported by new transportation and distribution strategies, must feature integrated business and logistical activities, adaptable business processes, real-time visibility of transportation events, and a sustainable cost structure.

Products flow in many directions and in multiple modes, and the lines between trading partners are blurring. Whether you buy or sell transportation services, having adaptable, integrated technology-based solutions will determine how effective you will be in the global marketplace.

Many trends in the market are driving the need for strong transportation solutions, including the following:

- Globalization – Outsourcing has increased the variability in transportation lead times. New markets are emerging throughout the world. Brazil, Russia, India, and China are all growing as consumers, suppliers, or both.
- Increased risk – Driven by increased in-transit variability, customs regulations, and compliancy rules, the need for visibility and information about the goods and their status has grown in order to report, relocate, reroute, or even replace goods and shipments during the execution process.
- Greater supply chain velocity – Faster movement in supply chains has resulted in smaller-sized shipments more often.
- Partner collaboration – Economic and security concerns have resulted in the need for greater collaboration among trading partners such as shippers and carriers, but also among customs and port authorities.

- Logistics outsourcing – Outsourcing is increasing worldwide every year due to continued market complexities such as international transportation, sophisticated fulfillment models, and increased costs such as energy and wages. In response, LSPs are becoming more sophisticated providers of logistics and transportation services.
- Cost and profitability awareness – Understanding cost and profitability helps your operations to make decisions that best support your business objectives. Understanding total landed costs, the costs of individual assets, and order profitability is valuable information for making transportation decisions.
- System integration – All business scenarios involve many business areas such as order management, warehouse operations, transportation operations, global trade, financial analysis, and production. Studies are showing that the ROI for companies is more dependent on system integration than on application features and functions.

These challenges have raised the profile of transportation management in the boardroom as companies strive to maximize capacity, minimize costs, and still meet customer and shareholder demands for service excellence.

Today companies are aggressively looking to expand their ability to reach their customers profitably and efficiently beyond their existing business networks. Shippers are exploring expanding to other geographic areas, either using third- or fourth-party LSPs or becoming themselves LSPs – better using their own fleet and sharing traffic with other companies. The LSPs that not only buy transportation services but sell them as well are managing slim profit margins while trying to increase customer service. They must update their antiquated system landscapes to remain competitive. In both cases, these challenges truly require an enterprise-wide business process platform.

An enterprise-wide business process platform enables companies to sense and respond to real-time transportation events and disruptions. Companies can connect better with the business network for improved collaboration with partners, suppliers, and customers

than is possible with a traditional, reactive message-based system. For example, companies gain the ability to automatically adjust a cross-docking shipping schedule to accommodate last-minute shipment or equipment delays.

With a standard business process platform, you have a platform for innovation. Innovation in business processes that take into account ever-changing customer service expectations (such as book to bill, order to cash, procure to pay, and export/import multimodal scenarios) can yield a profitable and responsive logistics operation.

Transportation involves two parties: the buyer and the seller of the transportation services. For shippers that purchase transportation services, these services are becoming a key factor in determining the difference between corporate profit and loss. Transportation services are the essential link between the extraction of natural resources; the fabrication of industrial, commercial, and consumer products; and the final distribution of goods to wholesalers, retailers, and end users. The ultimate goal: deliver the right product, at the right price and quality, to the right place at the right time. LSPs are growing year over year in percentage of transportation spend as a response to the growing demand for transportation

services. As buyers **and** sellers of transportation services, they are the key enablers. However, they are challenged with antiquated information technology systems and are feeling the squeeze, as they are in the middle of this complex process.

Historically, in a linear supply chain, commercial transportation was a fairly simple activity: goods and materials were taken directly from the manufacturer to the customer. But today, transportation is a complex procedure performed in a widespread, often global network of shippers and LSPs. In addition to being complex, transportation is a big business that provides a plethora of various services to meet customer demands – including door-to-door, intermodal, appointment scheduling, local assortment, returns, green initiatives, paperless processing, global trade, and distributed order fulfillment. Companies need a transportation organization or partner that has fast, streamlined business processes; works efficiently with network partners; and makes timely, profitable decisions. In short, they need a business network transformation.

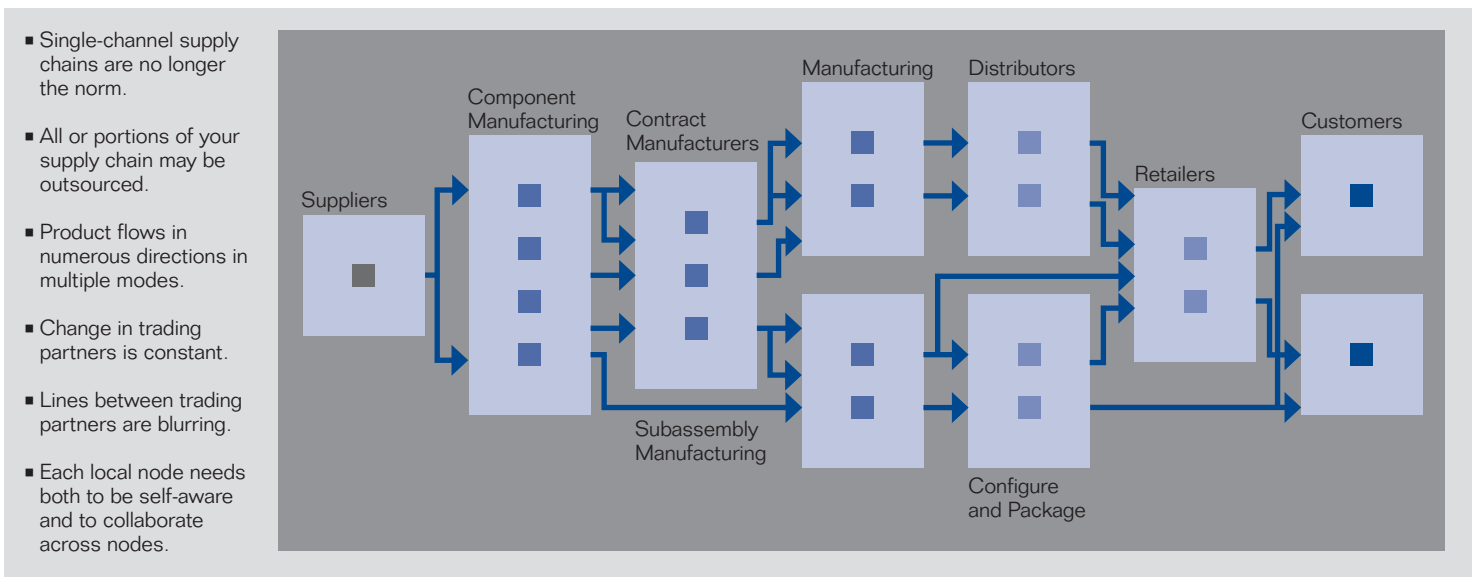


Figure 1: Transportation in the Adaptive Supply Chain

TRANSPORTATION BUSINESS PROCESSES: ACHIEVING INDUSTRY-LEADING CAPABILITIES

A company seeking to achieve more efficient transportation and greater profitability must take a strategic view in the way it performs every phase of the transportation process. It could be just as important to implement new transportation and distribution processes internally, and externally.

A business network transformation strategy for transportation relies on a tightly integrated and transparent transportation process to handle many elements such as managing freight procurement of LSP services; forecasting shipment volumes; planning and dispatching shipments; and having visibility to all activities through key performance indicators (KPIs), scorecards, and other important analytical tools. These analytical tools can provide process metrics such as profitability and monitoring of transportation spend, and include performance scorecards to measure both your own abilities and your partners'.

Transportation management systems can be broken into several primary yet integrated areas:

- Transportation order management
- Transportation planning and dispatching
- Transportation execution
- Transportation charge management
- Transportation procurement, tracking and analysis, and reporting

Transportation Order Management

In a demand-driven environment, the ultimate source of demand is the customer. Companies must anticipate their customers' requirements and improve responsiveness to their demands by bringing high-quality, value-added products to market faster than the competition.

Everything starts with the order, whether it is a customer order, purchase order, or transportation service request. Orders are the means by which companies communicate to one another – either electronically, paper-based, or verbally. You need data quality, synchronization, and consistency across these many different sources of order information.

Managing orders requires the ability to manage and monitor quotations, requests, changes, status, and confirmations. To be competitive, a company cannot afford to manage its transportation function in a vacuum; it must be able to communicate order information with uncompromised accuracy. This often requires data synchronization, cleansing, and communication among the various parties. Organizations must have standards and systems in place to help manage this communication flow, whether these are electronic data interchange (EDI) standards like ANSI, or the United Nations global trade standard (EDIFACT). Even with standards for improved data synchronization, the data is often inconsistent or incomplete and so must be actively cleansed.

In addition, your systems must enable easier connectivity between different industries. For example, when chemical companies sell goods to the auto industry, there are two standards working against each other. With a common business process platform, the integration of processes is made easier and more effective. In other words, you gain higher interoperability at a lower cost.

Without complete real-time visibility of the status of every order, there is no way to maximize cost savings or revenue potential. We do not live in a perfect world. Customers do change orders at the last minute, and sometimes suppliers do not provide complete information about what you should expect to receive. With a true integrated transportation solution, you have immediate, total visibility allowing you to include customers' last-minute changes on the next shipment or take advantage of more efficient, lower-cost transportation opportunities.

Transportation Planning and Dispatching

Products and materials can move into and out of companies at all hours, every day, anywhere in the world. Companies need the visibility to know when orders are being produced, stored, and shipped.

For years, transportation was managed facility by facility, and each shipment was planned independently. This method can hamper a company's efficiency. Leading-edge companies have moved from this model to the service-centric approach of coordinated route planning across the enterprise that uses resources as they move products and materials along the supply chain. This approach also entails a high level of visibility that lets companies support cost-saving transport methods such as continuous moves and parcel-zone skipping. At the same time, these movements have to be managed across the enterprise, by different departments, and sometimes in different world regions. For example, as the world is becoming "flatter," companies must have the ability to manage the import and export operations of international, multimodal shipments across their own organizational boundaries and business units.

Routing Decisions and the Cost of Doing Business

Transportation costs come off the bottom line, but they are a by-product of getting products to market. These days, labor, energy, equipment costs, and customer demand are increasing; at the same time, equipment capacity is decreasing, variability in the supply chain is difficult to predict, and margins are slim. Increased asset utilization is mandatory, and the speed of delivery is more important than ever. You need to take advantage of every opportunity to lower costs while getting the product to its destination on time, and this means having access to every possible routing option. Doing this requires a sophisticated planning tool that can create viable shipment plans by consolidating orders to optimal shipment sizes, using the advantages of various transportation modes, taking into account potential multistop and hub location options, and staying within the constraints of the real world.

Managing Your Workload

One of the most important aspects of system-wide planning and dispatching is the ability to automate as many of the activities as possible while manually dealing with the exceptions. You must fully address the unique demands of customers and suppliers when making fulfillment decisions. Customers place many

constraints on shippers and LSPs that must be considered when developing a solid routing plan. On top of determining revenue, costs, and ultimately profit, these constraints include delivery appointments, equipment requirements, managing large orders and small parcels, special equipment such as multi-compartment trucks, special handling requirements, and ship-with orders. Companies must be connected to the sources of this ever-changing information when making real-time fulfillment decisions. For example, a transportation planner must have complete visibility of fulfillment (for example, shipping options, costs, and routing possibilities) in a single system to make the best decisions.

Resource and Product Availability

Understanding when and where the product will be available in an inventory-strained environment is one of the most important elements for profitably meeting a customer's request on time and at the lowest total landed cost. Companies must have solutions that coordinate fulfillment activities seamlessly across their network. Solutions that provide total visibility of warehouses and manufacturing operations enable companies to take advantage of efficiencies such as cross-docking and direct trailer loading.

Making shipments from point A to point B can be simple or complex; it all depends upon real-world contingencies. Equipment and personnel availability constraints are becoming more prevalent as resources are divided due to huge customer demand. Having a good relationship with transportation partners can help solve these problems through managed contract commitments, automated forecasting and planning, smooth shipment-tender processes, and maximizing the use of equipment. With sophisticated route planning and dispatching solutions, companies and partners can find more optimal answers to these situations.

Multimodal Planning – Split Organizational Responsibilities

As goods move from point A to B in a global network, they often travel across air, land, and sea. This complicates the transportation-planning process by involving multiple modes of transport that have different constraints, capacities, and characteristics. At the same time, your organization may divide the responsibility for the entire movement among multiple groups. For example, the international shipping department may handle the export ocean portion while the domestic distribution group may be responsible for the import and getting it from port to customer. This requires you to have a flexible, decentralized solution supporting split organizational responsibilities. Also, sophisticated planning across hub and pool points, which require specific last-mile planning, are equally challenging across a complex transportation network where multiple individuals are handling different modal portions.

International Transportation

Shipping across borders adds another level of complexity and legal regulation. Shipments leaving and entering the country are checked and monitored in many ways. You need a way to expedite the importing and exporting of goods through customs, and to leverage improved transparency throughout the supply chain to share cross-border trade information with partners, such as freight forwarders, brokers, insurance agencies, banks, and regulatory entities. Comprehensive letter of credit management, preferential product treatment using trade agreements, and comprehensive analytics based on daily business data will mitigate financial risk and maximize profit with best use of international trade agreements, as well as avoid supply chain bottlenecks, production downtime, and errors that can result in costly penalties.

Transportation Execution

Planning, dispatching, and execution go hand in hand. Quotes are requested, confirmations given, and orders received throughout the day that often must be shipped as soon as possible. Complete control from planning to execution is crucial in supporting this demanding environment. Companies need to get shipments

sent on time and with the right documentation, as well as with accurate LSP and customer communications. At the same time, automatic processing of inventory status, order and transportation costs, accounting, and important order events are monitored and updated. A transportation management solution must provide the control and monitoring needed to manage high volumes of diverse transportation services.

Managing the Shipment Process

Companies need a variety of information to get shipments out of the dock doors and to their destinations. Shipment processing should easily support the ability to do the following:

- Create shipments to various customers, transfer locations such as cross-docks, and port or customs locations
- Quickly adjust the transportation plan from last-minute orders or a change in the carrier, and even modify route during transit if necessary
- Define the packaging of goods and how they are loaded into vehicles
- Manage hazardous-materials requirements
- Specify, update, and track planned transportation deadlines
- Print and transmit critical documents required for transportation such as bills of lading, material safety data sheets, and certificates of origin
- Show shipment-specific text messages such as delivery instructions and contact information
- Manage both inbound and outbound shipment documentation

Collaboration

Collaborative transportation planning between shippers and their LSPs allows both partners to streamline work processes and benefit from reduced handling costs and greater transparency and efficiency. Shippers and LSPs can share information about their shipment plans and resource availability. LSPs can share their resource availability, which allows shippers to develop plans based on delivering a lowest-total-cost solution. At the time of tendering, further collaboration is possible to meet real-world constraints such as delivery appointments and last-minute

changes in an LSP's resource availability. A transportation management solution must support communication through standard communication methods such as EDI, e-mail, or XML. Web services technology has moved to the next level with the introduction of enterprise service-oriented architecture (enterprise SOA). Specifically designed and modeled enterprise services based on industry standards like EDIFACT will give customers the ability to extend existing functionality both from a process perspective (business-to-business or B2B integration) and from extending or developing new user-interface applications (UI or application to application, A2A).

Using Automation and Control – Reducing Workload

The execution process can be very task-intensive. Workers have to pick products, stage deliveries, load trucks, print documentation, bill the shipment, and remove the inventory from the system. Often, all of these tasks are performed manually, but they can be controlled and automated based on a company's business process needs. Incorporating standardized best practices reduces errors, limits handoffs, provides a single view to the customer, and helps you to do it right the first time.

Companies need the ability to automatically carry out activities such as posting goods issue for the deliveries in the shipment, creating billing documents for deliveries in the shipment, and printing key documents and lists. At the user level, they need to provide information such as the name of the driver at check-in, seal and container numbers, and data validation.

Companies also need solutions to perform everything from checks on dangerous goods to printing of shipment documents. They need to create a close connection between transportation execution, warehouse management, and foreign trade so that goods issues or receipts, international documentation, and controls can all be coordinated with the transportation plan. All of these complicated processes can be made easier with automated, Web-enabled collaborative functionalities.

Transporting Dangerous Goods

Transporting substances and products that may be a risk to public safety has special requirements. To fulfill the statutory requirements for shipment of dangerous goods, it is necessary to check whether shipments containing these goods are permitted in agreements made with the countries in which the shipments take place. Therefore, dangerous-goods checks should be centrally defined in software for environmental health and safety. Dangerous-goods checks must be integrated into transportation processes to ensure that dangerous-goods master data is complete, the mode of transport is suitable, and the dangerous goods are marked correctly.

Transportation Charge Management

Financial operations include more than the execution tasks of "freight, audit, and pay." Executives need decision-support tools that enable them to sense real-world disruptions, as well as financial and logistical tools to make informed, timely, and profitable decisions. To achieve this, companies must have the ability to integrate the financial chain into transportation activities via accurate, real-time, activity-based costing, billing, and freight auditing. In addition, the advent of the Sarbanes-Oxley Act has raised the profile on how companies report and control financial transactions. Companies are looking for a closed-loop transportation charge-management process for automating freight invoicing, payment, settlement, and reconciliation.

Impact on Profitability

How much will transportation impact your profitability? That is a typical question. You get requests for quotations frequently, you have to cost different fulfillment and transportation activities, and you need to evaluate not only your direct costs but also any additional charges you may want to include such as overhead and profit. Freight rates are not always simple and can involve a host of complex calculations. At the same time, you must manage the determination of freight cost for all types of shipments and be able to include many different types of charges such as VAT, fuel and bunker, cross-docking, detention, and special handling charges and fees.

A vast array of carriers and third-party logistics companies are in the business of making profit by providing the best service at a reasonable cost. At the end of the day, these companies must understand their profitability at the operational level – even on a shipment-by-shipment basis. In today’s low-margin environment, knowing when you are making the correct business decisions is critical; you need the ability to review the margin to ensure the profitability of each shipment. Managing the costs also involves understanding their impact on your bottom line.

At the same time, the ability to minimize expensive processes is paramount. If you are paying for freight, the freight payment process can be streamlined with self-billing (or electronic receivable services) functionality, which allows companies to pay the LSP without receiving an invoice. In this situation, invoice verification is carried out by the LSP. Best-in-class companies never see the thousands of freight bills that ordinarily would have been generated and manually processed. For the selling side of transportation services, the billing process could span inventory-handling, storage, and transportation activities.

Freight Settlement

Efficient freight settlement is one of the most important parts in an end-to-end logistics process where you are integrating logistics data to the financial operating areas. Settling freight costs is a complex assignment of transportation expenses or revenues across your financial accounting areas. Whether you are buying or selling transportation, ultimately it impacts your or your customer’s costs of goods sold, and assessing the impact on profitability is crucial. This could be across the enterprise or even within a specific channel, product group, or industry. The business goals are to improve billing accuracy, customer service, and profitability. You need to track and assign charges based on transportation events to ensure a clear understanding of your cost drivers.

Additional Business Processes

Managing the Freight Contract

To fully support the freight procurement process, companies must meet requirements for contract management, bid preparation, bid proposals, bid responses, contract award, and contract creation. These capabilities structure the relationship between shipper and LSP by streamlining the contract-negotiation process.

The greatest benefit a freight procurement solution can provide is the ability to set expectations by channel and lane for the expected transportation spend. LSPs are constantly competing for freight, and it is challenging to manage their expectations and volumes while trying to achieve the best service levels at the lowest cost. A freight procurement solution can provide a centralized tool to manage this.

As a company’s supply chain evolves, so do relationships with partners such as LSPs. An enterprise may want to renegotiate existing contracts to include new business while changing the way shipment volumes are divided among LSPs.

The contract contains rates, terms of agreement, and other freight-related charges such as accessorials, detention, and minimum charges. These charges provide information for the optimizer to make logistics decisions based on costs, including decisions about equipment allocations.

Today, successful companies are actively managing the freight procurement process by looking at the large expenditure on an annual or semiannual basis. Companies must control their freight spend beginning with a freight procurement process.

Once they do, the ability to take advantage of leakages in freight spend becomes more easily apparent and, frankly, obvious. For example, inbound transportation costs are buried in the cost of goods when freight is prepaid. By moving to an inbound collect model, companies can actively see and manage transportation costs as a portion of the supply chain; costs are no longer invisible

and uncontrollable. Savings as high as 25% have been achieved by moving from a prepaid to a collect freight model for inbound transportation.

Providing Performance Visibility

Analytics play an essential role in helping a company sense and respond to important changes in the market. To make the right decisions promptly based upon a complete, accurate view of their business, companies must align execution with business strategy.

Throughout a company, employees must be able to find answers to problems quickly when KPIs fall outside acceptable ranges or objectives are not met. Managers must have the tools to track business activities to ensure that they are in line with overall strategies. Clear metrics are required to achieve these goals.

Having centralized control and easy, role-based access to essential data is critically important in supply chain management. Pre-defined analytical applications delivered through a user-friendly Web interface can give users at all levels secure, filtered access to key information on supply chain activities and processes. When

this occurs, business intelligence is combined with operational data that relates to business process, producing a “one-stop-shopping” synergy of analysis and action. For example, LSP performance metrics help identify the causes of service failures and cost overruns by using scorecards and analytics of internal and business-partner processes. With such analytical applications, companies can monitor and control the ways that LSPs provide their services.

Real-World Asset and Event Visibility

With the fast pace of business today, companies must be able to prepare for the unpredictable. Disruptive events caused by natural crises can have a widespread effect on capabilities across an extended supply chain. For example, during Hurricane Katrina, a global chemical manufacturer required real-time information about goods and materials on ships scheduled to dock in the Gulf of Mexico. A primary concern was the potential risk to the environment should shipments in the area become lost at sea. It was also important for companies to address the needs of customers by providing alternate shipments through unaffected ports. This illustrates the importance of process

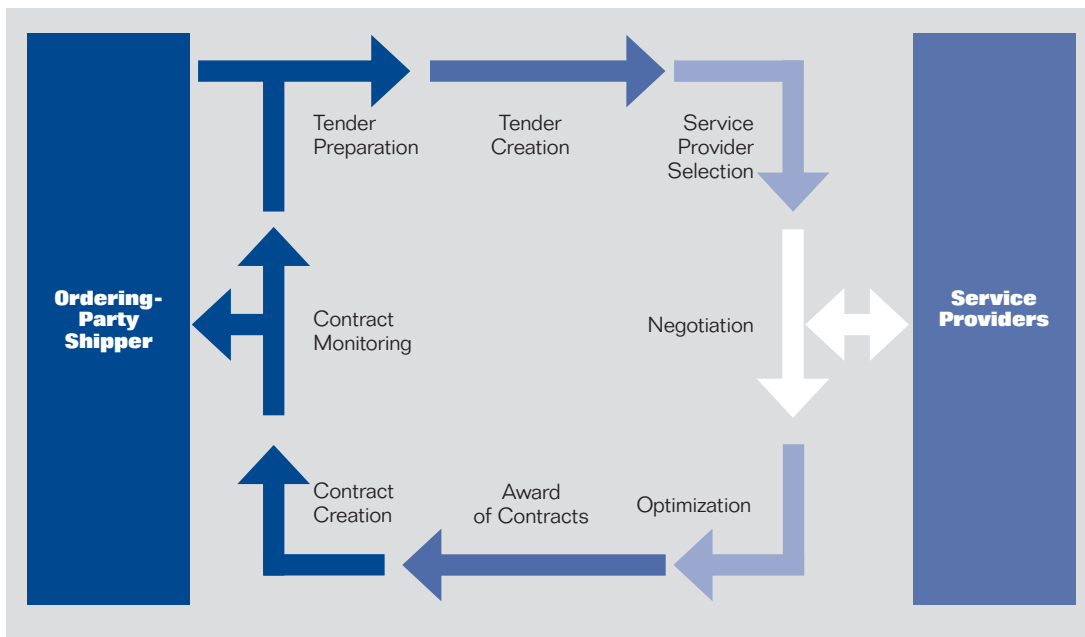


Figure 2: Strategic Freight Management

visibility – in particular, visibility into order status and disposition.

Companies need fast, accurate information and specific details about orders. They need the visibility to plan their resource needs and revise plans based on business objectives. And they must reduce their time to action when responding to an unplanned event or crisis by having real-time visibility across the supply chain.

In many cases, this means companies must move from managing expected outcomes of business processes to managing by exception. This shift allows them to focus resources on the areas that need the most attention instead of managing processes that are working well. To have an overview of supply chain events, companies need the ability to do the following:

- **Monitor** supply chain activities and compare plans and forecasts with actual results
- **Notify** the proper employees about process deviations in real time
- **Simulate** the consequences of an event, which provides guidance for decision making
- **Control** the process throughout the adjustment of various parameters such as process time and mode of transport
- **Measure** performance based on user-specific performance criteria

SAP DELIVERS THE GOODS

SAP addresses the core dilemma of transportation – how to meet the unique delivery requirements of customers while still achieving profitability – by providing software that gives companies a competitive advantage. With SAP® software, business processes across the entire enterprise and extended transportation network are integrated with flexibility. The software enables managers to perform continuous route optimization based on real-time events, identify revenue opportunities, and improve asset utilization. Embedded analytics help managers increase profitability by calculating net gains during the entire process from bidding to delivery.

SAP is helping simplify the process by increasing the transparency and ease of moving information across enterprise borders. SAP is providing customer-centric solutions and offers the only environment that delivers this “single source of truth” on one platform. From an execution perspective, we leverage architecture and platform. Whether you are shipping internationally and need state-of-the-art customs processing such as global trade services, or just need an independent transportation solution for routing, dispatching, rating, and billing – SAP provides the platform and the solutions.

Through a single platform, SAP brings industry-specific interoperability based on standards. Enterprise service enablement has been the catchphrase for providing increased flexibility and adaptability in systems today. We provide a solution built by design to incorporate services technology. We also leverage existing functionality such as cost accounting and financials; global trade for customs processes; warehouse management for the “four walls” activities involved in picking, packing, staging, and shipping; event management for track and trace; business intelligence for reporting and analysis of KPIs; and so forth.

SAP brings together technology, applications, and partners. The SAP NetWeaver® platform is a foundation on which new applications can be built, both by SAP and by partners, using enterprise SOA. We have seen how speed of development, quality, and efficiency in building new solutions have increased as a result.

Technology is a key enabler, but it must manage the physical movement of goods. The physical flow of goods across companies and partners represents the real fulfillment process; its dynamics are expected and considered as events in real time. And while planning is preparation based on experience, changes are inherent. Real excellence is the ability to efficiently prepare and actively manage the changes and opportunities that present themselves during the real-time experience.

To monitor only what's going on is an improvement, but it is not entirely sufficient since the changes occur along the complete fulfillment network. Operating key interrelated activities in silos costs money, visibility, and time. SAP enables a proactive management of the process, and the ability to operate and drive the changes along the physical flow of goods. SAP solutions enable you to use this information to drive execution, and this information becomes a means to manage and control the fulfillment process. You can sense, learn, and adapt, but also manage and innovate.

An Adaptive Supply Chain Network

The SAP Supply Chain Management (SAP SCM) application also contains functionalities that are designed for the transportation industry. Powered by SAP NetWeaver, SAP SCM leverages emerging technologies and “real-world-aware” practices to transform traditional supply chains from linear, sequential steps into adaptive supply chain networks. In these networks, communities of customer-focused companies share knowledge and resources and adjust intelligently and profitably to changing market conditions.

Global Trade

The SAP GRC Global Trade Services application automates your core export tasks, streamlining customs management, taking advantage of international trade agreements, and mitigating financial risks. That helps you ensure regulatory and trade compliance and improve cash flow, since faster customs clearance means faster payment. SAP GRC Global Trade Services helps your business classify products easily, manage documentation (including those required by the U.S. Export Administration and other government agencies), and reduce risks of noncompliance through screening for sanctioned-party lists and embargoes.

TO LEARN MORE

For more information about how SAP software can help your transportation organization transform and integrate its IT systems for flexible, streamlined business processes, call your SAP representative today or visit us on the Web at www.sap.com/scm.

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