Optimizing Transportation Performance

Your life doesn’t happen in nice, neat batches, it’s real time. So is your transportation network. So why does your transportation management system still use the batch mentality? New systems are available that make transportation management as real-time as the dynamic logistics marketplace.

Last minute order changes, e-commerce, promotions and other just-intime delivery variables are becoming increasingly common in most industries. Shippers need to adjust plans and coordinate delivery execution in real-time. It is no longer acceptable to plan transportation in a batch process and then manually correct the plan as real-world changes occur. This “batch and correct” strategy saps the potential for realizable ROI and service delivery success.

Similarly, the ability to handle more complex transportation scenarios in real-time brings the promise of additional service efficiency and cost reduction. There are savings to be harvested by applying optimization technology to inbound and outbound freight flow, compound delivery routes with multiple origins and destinations, and effectively utilizing distribution hubs and consolidation facilities to combine long haul movements with local distributions for ultimate cost reduction.

What is needed is continuous optimization, planning and execution engines that optimally adjust complex delivery plans to accommodate changes in orders, capacities and constraints in real-time. They must evaluate a wide range of delivery alternatives in real-time to deliver maximum cost savings and best satisfy service delivery requirements. These adaptive solvers continuously execute against shippers’ order streams, accepting any changes until an optimal, lowest-cost routing consolidation is produced, or the load must be released to meet staging and transit timing. This enables shippers to quickly respond to tight customer deadlines and requests for customized product delivery while still gaining the benefits of optimized consolidation and routing.

Carrier Management Optimization

Critical aspects of transportation execution are the assignment of loads to carriers, securing (tendering) the carrier’s commitment to handle the load, and managing exceptions that occur in transit. Carrier cost and capacity become especially critical issues when bulk, last-minute and less than truckload (LTL) shipments are common.

Today’s advanced systems optimally assign loads to carriers based on rate, mode, capacity and contractual obligations and previous service delivery performance. They can make assignment decisions between internal fleet resources and the contracted carrier community by dynamically optimizing against negotiated capacity and contract commitments. The systems effectively assign the most expensive loads to least-cost carriers, enabling companies to achieve substantial savings and better manage the carrier process.

These new systems also automate the tendering process, eliminating costly “dialing for diesel” processes through the use of EDI and web portal tendering. They automatically tender assigned loads, track responses for acceptance or rejection, and dynamically move to secondary carrier tendering, when needed. They also can build and execute continuous moves and back hauls to avoid deadheading and
more effectively take advantage of carrier discounts.

**Event Management and Communications**

There is no greater need for real-time processing than when exceptions occur in transit. Transportation management systems must handle these exceptions flawlessly through a combination of built-in event management capabilities and web portals for communication between shippers, carriers and customers.

This event management, resolution and communication must be handled real-time to have value. Again, batch and correct systems can't provide this. Transportation systems today must be able to react in real-time not only to shipment planning issues, but all phases of transportation delivery. By being alerted to and automatically handling problems that occur in transit, and notifying customers of solutions real-time, customer service and satisfaction are greatly improved and delivery costs are reduced.

**Dock and Yard Management**

Another transportation area requiring real-time optimization is dock and yard management. However, these areas often fall under warehouse operations’ responsibility. If automated at all, these functions typically are associated with warehouse management systems not integrated to transportation systems. This disconnect causes delays in processing inbound and outbound shipments and ensures that warehouse and/or transportation operations will be suboptimal.

For greatest efficiency and control of distribution operations, warehouse management and transportation management systems must use an integrated approach for handling dock scheduling and yard management functions. These integrated solutions must automate appointment scheduling, level-load appointments throughout the day, accommodate resource constraints, match load processing requirements to dock resources, and coordinate trailer moves from the yard with incoming and outgoing trucks. A web portal should also be available to enable carriers to request and receive appointment slots without human intervention. Optimization technology can take this process a step further by optimally matching dock appointments and trailer moves to warehouse layout, worker skills and certifications, and fulfillment requirements. For example, outbound shipments consisting primarily of products requiring light assembly or special packaging would be scheduled for dock doors nearest this finishing area and at a time when available staff can reasonably complete the work, while inbound pallet shipments might be scheduled for doors nearest bulk storage. Or hazardous materials would be scheduled for dock locations and workers certified to handle the specific materials.

By automating and optimizing dock and yard management, resources are optimally assigned, bottlenecks are avoided, dwell time charges are reduced and service is improved.

In summary, it’s a real-time world out there. Orders, capacities and constraints change in real-time and your customers expect real-time service. Your transportation management system better be able to support these needs in real-time, too. But beyond the service aspect, real-time systems improve transportation performance by providing the agility to react to change with lowest-cost, best-service delivery.

**About RedPrairie Corporation**

For over 30 years RedPrairie has enabled leading global companies to create competitive advantage through supply chain excellence. RedPrairie's comprehensive technology solutions provide rapid and sustainable return on investment by optimizing the performance of people, places and processes.

RedPrairie provides industry-tailored solutions for diverse markets, including consumer goods, direct to consumer and traditional retail, food and beverage, high tech/electronics, third party logistics, industrial/wholesale, automotive and service parts, and pharmaceuticals.

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