White Paper

CloudLogix

Providing Predictability and Reliability

Bringing decision makers the most up-to-date information available
Insuring the best business decision possible

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Predictability Reliability Solutions Optimization

Executive Summary

Supply Chain organizations provide differentiation from their competitors on a number of possible vectors. Some organizations become competitive through the strength of personal relationships; some become competitive through better processes, procedures and tools that help accomplish those processes. The former type of organization can only scale as far and deep as the relationships that form the foundation of the organization can go – the danger is that this can be a fragile way to form a business. If a major partner leaves, or damages the relationship, major parts of the organization can wither. In the latter type of business, business is based on predictability and reliability and less upon relationships. If the predictability and reliability is exceptional, business will be exceptional.

A simple example of the latter type of business is Starbucks Coffee Company. Starbucks does not have the cheapest or the best coffee that you might find in a particular town. Even in Starbucks home city of Seattle, there are many boutique coffee shops that offer superior product at a cheaper price. There are many reasons that Starbucks is successful, but one of the many reasons is based in the predictability and reliability of the product. Any Starbucks that a customer chooses to enter will have a familiar ambience, familiar sounds, familiar people, quality service and good, predictable coffee. Joe's Coffee Shop down the street may offer a better coffee at a better price, but it is a risk or may be missing one of these vital ingredients. Starbucks is predictable and reliable in its offerings.

In the software business, most startup companies are formed on new ideas or innovations. The overall business problems may not be new, but the approach and the process must be unique enough to lure customers away from older, less risky solutions. The balance in software is to find an approach that is unique enough in the way it solves customers' problems that they are willing to take the chance on a new company. We hold the belief that any new logistics company can be successful in approaching the marketplace with the same view of changing the world. As long as the solution provides predictability and reliability!

The Need for Predictability and Reliability

Supply Chain organizations have a clear linear evolution that is dictated by their current abilities. This evolution defines the needs, requirements and behaviors of the organization at that moment and is a continuum, starting from a completely reactive organization to a completely proactive organization. A reactive organization is built on a "fire-fighting" model, where the organization prides itself on its ability to adapt, assimilate and overcome. The defining characteristic at this stage of the model is that very little planning is done in this organization, or the planning that is executed is performed in isolation from supply chain operations. Quite often, the organization relies upon a few roving "lone rangers" who delight in being able to pull the organization's "fat out of the fire". But what if the masked men/women are too swamped? What if they leave? In general, this model works for a period of time, but success is difficult to scale or to endure.

The most efficient, effective and scalable supply chain organizations have to be proactive and deliberate in the business processes and functions that make that organization successful. The processes should

form the foundation of the operations and should be replicable at every site and echelon of an organization, much as Starbucks does in every store.

So what does it mean to be proactive? Does this imply that we will achieve Supply Chain Visibility? We believe that simple visibility is not enough. As one noted supply chain manager says "Visibility is the baseline that we need to achieve". As another manager said "Visibility lets me know where I went wrong, weeks after I needed to know it." A proactive organization needs to incorporate forward-thinking tools and processes to fully take advantage of the opportunities that visibility affords. The novelty and differentiation that we are proposing for this supply chain organization would be to provide this set of processes, procedures and accompanying tools.

What are we trying to achieve with these tools? We are trying to build an organization that will offer a complex notion which some people call the "Active Supply Chain". From a customer's perspective, the supply chain organization is a trusted partner that uses leading-edge business processes to incorporate customer needs, supply chain demand, rapid decision support that provides the most up to date information and effective utilization of carrier partners to provide an effective solution that will be unique and in demand in the marketplace. The organization must canonize these processes and functions in order to make this offering scalable and durable. Software tools will offer structure and form that will help the organization replicate these processes.

The Tools

What do these tools look like? The Active Supply Chain is a model that incorporates analytical tools with some fundamental operational tools. The model as proposed is characterized by visibility of the supply chain in motion and at rest and by incorporation of two types of analytical models, lane probability modeling and demand forecasting models.

The first fundamental operational tool required is a work-flow management component. This tool is a work flow engine that enables management and visibility of milestone-based supply chain processes, such as order management and management of customers, vendors, shippers and suppliers. For example, order management provides visibility to, and management of orders that are in motion. A good work flow management tool should enforce business rules of any client organization, provide mechanisms for communication and approval processes of the orders and shipments, and integrate with routing management to enforce shipping rules of the business and to find the most cost effective shipping solution. This tool should use social networking to allow users and customers to create, manage and coordinate milestones, orders, shipments and operations.

The second fundamental tool is inventory management. Inventory management software shows the state and location of inventory from the moment of the title transfer until the inventory is no longer owned by the user. Visibility to inventory just in the warehouse is insufficient for gather a complete view of inventory. Inventory has to be managed in motion as well as at rest.

The third fundamental tool is routing management. Routing Management is a single platform to manage all carriers, all shipments and all freight bills. Routing Management allows a customer to

consolidate and ship material with approved carriers and to tender, track and audit shipping invoices. When used in conjunction with use the work-flow management software, the user can gain better visibility and control of the supply chain.

The fourth fundamental tool is data integration, adjudication and synchronization. A supply chain organization needs to integrate seamlessly with customer systems, internal business systems and with other partner systems to provide the near-real time response time that this model would need. Data must be correct (adjudicated) according to business rules in order to ensure that no bad data is injected into the system. A good integration model will reduce the training time required for employees handling inventory while providing the basis for immediate visibility and analysis for the customer.

The fifth tool is an addition to routing management. The routing management software should integrate with lane optimization analysis to give a solid, statistically accurate prediction of options of routes and timing to ship this material, with optimization expressed in probability that this shipment will arrive at the destination in the required time. This optimization engine will take into account the current lane status, current estimated time to clear customs and other delay factors. The optimized routing options can either be manually or automatically selected to choose that route that best meets the business requirements. Essentially, this optimization engine will demonstrate the derivation of decision tree data to offer optimization and risk assessments for logistics decision making. Whether manually or selected by automation, a route is selected and arrangements are made with the appropriate carrier(s) to put this shipment in motion.

The sixth tool is demand analysis. The exact demand forecasting model is determined by the nature of the organization and the end goal for the products/materials being moved. In a manufacturing environment, this may be as simple as a list of need dates for the materials and parts based on the constraints managed by the manufacturing applications. In an MRO environment, this will include complex analysis of anticipated repair parts based on the current usage patterns. In a retail environment, this may be a time-series analysis of products with similar demand, adjusted for current conditions. Demand data is then used to generate orders or dictate changes to orders or shipments.

Conclusion

As organizations strive to be more effective and efficient in managing their supply chains, the organizations who have reached a point in evolution where they are ready to incorporate analysis into the logistics process or are ready to take control of their supply chain, they will be striving to achieve some form of Active Supply Chain. Evidence indicates that this is the direction of forward-thinking businesses. We will be ready with the processes, functions and tools to help them achieve their goals.