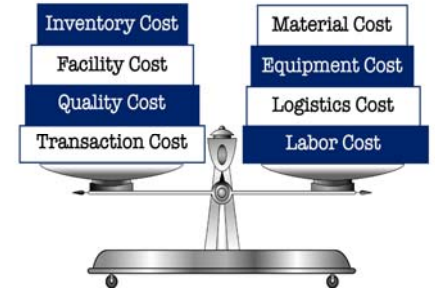


STRIKING THE RIGHT BALANCE

Optimizing Supply Chain Network to Manage Costs

By Robert Glenn Sims, ASW Global, LLC



As a Third Party Logistics Company, ASW Global has the opportunity to study and redesign distribution models for many industries. Each redesign has an intended goal associated with the overall business strategy of the client. This trend has escalated with the pressures arising from tough economic times. Kate Vitasek and J. Paul Dittmann in their recent white paper shared one observation, often quoted, which must be duly noted, "Firms who continue business as usual, rather than fundamentally altering or at least updating their supply chain strategy are truly playing dice with their future."

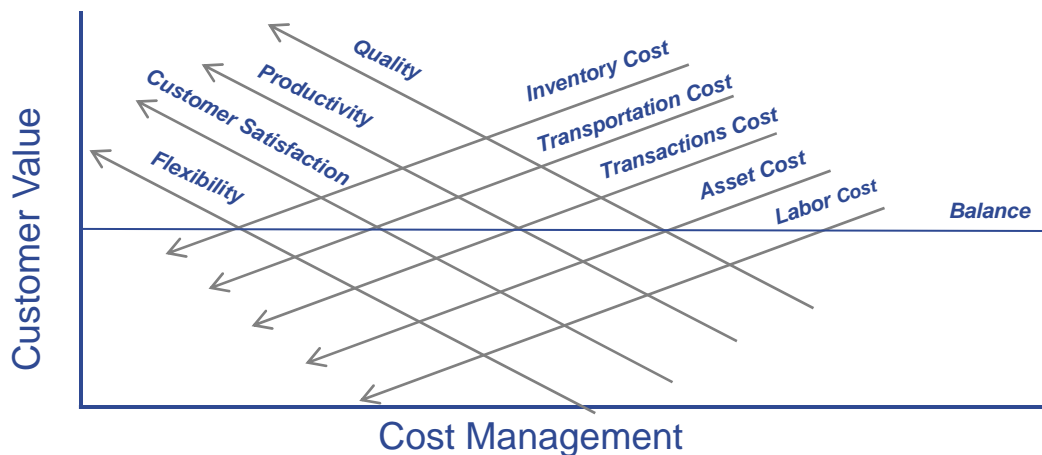
Regardless of the industry or the organization, any effective change must achieve four goals: 1) increased efficiency, 2) lean (elimination of waste), 3) flexible and sustainable processes and 4) cost containment. For a strategy to satisfy all four criteria, it is necessary to identify and balance all the costs associated with the existing distribution system. While this sounds fairly obvious, the challenge surfaces when these factors are managed by different functions in the organization.

Therefore ASW has designed **Supply Chain Optimization Model (SCOM)[®]**. SCOM[®] is the process that ASW employs to analyze and guide clients through an effective redesign. SCOM[®] assists the client in integrating functionality in order to define the right balance to align the procurement and logistics objectives with the client's business strategy and priorities.

Identifying True Costs

There are at least four major functions that play a role in affecting supply chain costs: material procurement, supply chain distribution, facilities management and operations management. Within these functions, there are departments whose work can affect or upset the balancing act that is required when designing solutions with a lean management approach.

In the SCOM[®] approach ASW leads client team members through a comprehensive program in which ASW and the various client departments work together across functional lines to understand the essential components that need to be in balance. By managing these components, the model consistently achieves the best value for ASW's client and the client's end customer.



Typical data elements that must be factored include:

- Inventory level
- Packaging requirements (size, kind, weight, parts per pallet)
- Material cost
- Suppliers
- Delivery and return frequency
- Facility requirements
- Engineered standard work hours
- Shrinkage
- Safety stock requirements

Supply Chain Optimization Model[®] SCOM For One Utility

This article presents just one example of **SCOM[®]**, customized for a utility company. Like most organizations, existing business processes were long established and embedded in the client’s operations. However a new project surfaced, the implementation of Automated Meter Reading (AMR) allowing the client team to look at the best methodology to accomplish the project. The project approach allowed procurement, operations, and logistics executives to review existing assumptions, identify efficiencies and inefficiencies, pilot implementation without disassembling the whole process, and assess an application in a real environment which allows for validated outcomes and ROI.

The team customized SCOM[®] specifically for two commodities (AMR’s and ERT’s) to demonstrate process capability with validated results. SCOM[®] resulted in establishing an Origin Distribution Center at ASW’s facility in Mogadore, Ohio, that would receive Less-Than-Truckload (LTL) and Truckload (TL) shipments to consolidate and deliver in Milk Runs (TL’s) to the operating facilities at a planned replenishment frequency. The team’s objective was to optimize the network to provide the best total cost value and operating efficiency. The team adjusted various distribution process elements, including order releases, install data systems and safety stock requirements, delivery frequencies, network min/max levels,

and transportation planning.

While the existing model that the utility used may have worked as designed for normal operations, it was insufficient to support intense business and process control requirements cost effectively. Process inefficiencies are typical of mature supply chain models and are summarized in Tables A and B.

The first step was to analyze current state. Some of this required retrieving existing data or identifying how to gather data not available. The team conducted physical visits to several facilities to complete the “current state” process maps and validate the data collection process. The team developed a static simulation tool that supported a “what if” analysis to assist in striking the right balance for setting direction. Various cost comparison analyses were developed to display the relationship with inventory cost to storage and handling cost, as well as the transportation delivery frequency to storage and inventory cost. The costing tool assisted the team in identifying, balancing and managing the impact of alternative decisions with a higher confidence level. The results were used to provide graphical depiction to illustrate the expected outcomes to the impacted organizations. The graphics also assisted the team to visualize and develop data driven conclusions.

The selected alternative established a channel to synchronize the inbound and outbound flow of material to achieve an economic delivery frequency to the local operating facilities while balancing inventory levels, ware-

Process Inefficiencies for Project Implementation

- *The meter distribution process failed to give visibility to the total management network process and actual cost structure*
- *The logistics and distribution process inherently optimized pieces of the network without balancing the enterprise cost.*
- *The process was not designed to optimize transportation, facility management, warehousing and inventory management cost.*

Table A

Resulting Outcomes From Inefficiencies

- *Meter inventories far exceeded reasonable levels.*
- *Transportation costs were above industry levels.*
- *Local warehouse facilities were running out of storage space.*
- *The proper inventory and material recovery cost accounting procedure (or lack of) drove a great deal of administrative work for the operations team.*
- *The cost and complexity of managing the in-stock inventory exceeded the material purchase cost volume discount in some cases.*

Table B

Supply Chain Optimization Model® SCOM Results

The selected solution is forecasted to yield annual savings of over 20% of the cost for inbound transportation, coupled with an estimated 50% savings on outbound transportation to and from local operation shops. A 100% savings on material recovery will offset the slight increase in warehousing and handling costs of less than 10%.

The project's initial results are on target to achieve greater-than-projected savings, the total network cost will be reduced by as much as 60+%, and the improvements that were made in the material recovery process will be approximately 60% of the logistics and distribution cost. The improvements of inventory accuracy will result in savings of almost 15% in inventory carrying costs and the improved transportation model and planned replenishment will allow for a dramatic reduction in on-hand meter inventory. These savings and measurable data have encouraged the team to accelerate the planned phased implementation.

Industry Applications For SCOM®

Material complexity and system variation are inherent to the nature of the utility business. By integrating ASW's supply chain approach, the client can achieve efficiency improvements. The study was completed using two commodities (Meters and ERT's). For utility clients, the process would work equally well for Smart Meter and advanced technology grid repair.

For other industries, the processes, systems and analyzing tools used to complete the project can be applied to study any commodity. While the process for achieving results can be difficult, the commitment demonstrated by operations leadership to evaluate and change business processes will yield substantial operating benefits. Table C highlights why the process works.

Why Review Process Works

- Ensures every department is working with common data at all times
- Drives accountability for all data elements
- Provides visibility into processes occurring outside own department
- Streamlines coordination of sequential and parallel processes in different departments
- Minimizes data collection, validation and exchange
- Enables "What If?" analyses prior to making sourcing decisions
- Provides data records (history) throughout the planning process
- Enables analysis of resources needed for installation of meters and ERT's
- Provides analysis used for capital budget forecasting

Table C

Six Sigma and lean supply chain management are not new concepts and yet they remain elusive for many industries due to the inter-dependencies of the various elements of the overall business process. Through SCOM® ASW demonstrates that not all supply chain elements respond in a synchronized way and will require balance to achieve the best results for the company. Using the six sigma process, the ASW project team was relentless in its quest for continuous improvement to meet customer needs by focusing on data, process alignment, bottom line results and process transformation.

REFERENCES

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2. Supply Chain "Game Changers", Supply Chain Digest, Oct 13, 2009.



Biography - Robert Glenn Sims

Robert Glenn Sims was appointed Chief Operating Officer for ASW Global, LLC, in October 2007. As COO, Sims leads the strategic development of all Supply Chain Services for client customization including outsourcing services, emerging market sourcing and enterprise cost modeling. Sims designed the **Supply Chain Optimization Model SCOM®** based on years of experience in the implementation of global procurement and supply chain management solutions.

Sims has a Master's of Science in International Logistics from The Georgia Institute of Technology in Atlanta. His prior experience includes over twenty years in domestic and international executive roles for Ford and GM. Sims is a dynamic speaker, and has shared his expertise at international trade forums in China, Hong Kong, U.S.A. and Europe. His presentations focus on actual applications, providing practical and creative insights on experiences, processes, and methods for incorporating Lean Principles and Six Sigma Methodologies to engineer Global Supply Chain solutions.

ASW Global LLC

ASW Global, LLC is a supply chain management company headquartered in Akron, Ohio with several locations throughout the Midwest. ASW is a recognized leader in warehousing and distribution management. Currently, ASW is one of the largest minority owned and operated retail distributors in the states of Ohio and Michigan and with a client portfolio of Fortune 500 companies. ASW services range from distribution management, warehousing, cross-docking, material packaging, kitting and transportation management to light assembly and material recovery.

ASW's specific product offering in the utility sector includes enterprise management of the supply chain network; starting with commodity sourcing, logistics planning, material delivery and inventory management and material recovery. ASW has assisted utility clients in establishing and executing A/B/C commodity planning strategies that have yielded outstanding results in inventory management, improved reliability and community good will. In addition ASW clients have realized cost savings ranging in the area 30 to 40% on material cost, asset reductions and logistics management while refocusing their internal resources on value added activities.

What differentiates ASW Global, LLC from others in the logistics and distribution industry is their ability to engineer network supply chain solutions that would compete with the "best in class" consulting company's at the price of admission.

For More Information Contact

Robert Glenn Sims

ASW GLOBAL

3375 Gilchrist Road
Mogadore, OH 44260

Phone: 330-733-6291

Toll Free Phone: 888-363-8492

Fax: 330-733-5196

www.aswglobal.com
