



Supply chain improvements open doors to working capital

For most of the history of modern commerce, supply chains have been regarded as a necessary cost of doing business. An inevitable and monotonous sequence of physical operations and commercial transactions place a tremendous burden on the bottom line. The automation of some clerical functions or negotiating transportation prices may be possible, but the supply chain is widely considered to be unavoidable overhead.

However, most industries are starting to recognize that supply chains present an incredible opportunity. A supply chain that is both efficient in operation and effective in delivery is now seen as a real differentiator – a source of competitive advantage and shareholder value.

As more products become commoditized, speed of fulfilment and guarantee of availability now rival price and specification in terms of importance (not only for consumers and end-users, but within manufacturing and distribution). This trend continues to gain momentum with the rise in e-commerce, which is radically changing customer expectations of what and how the supply chain can deliver. Additionally, e-commerce has forced many businesses to recognize that they are now running multiple business models through multiple channels, all of which require different supply chain strategies.

Supply chain methodology undergoes a radical transformation as often as every seven to eight years. Many supply chain teams, including CEOs, are aware of this. One positive outcome of these changes is that supply chain professionals are becoming much less sector-specific – each industry is willing to learn from each other. However, adapting from one style to another has its own set of challenges.



Jaymie Forrest
Global Supply Chain Lead

Embracing change

Supply chains have to continue satisfying business obligations while transitioning to a new work environment. Shut down for a year, or even a week, is not an option – it is a brave CEO that endorses a move from a functional supply chain to a new and unproven model. New supply chain processes must include robust and convincing transformation strategies and plans.

But, perhaps the biggest hurdle for teams looking to implement new supply chain strategies involves working capital. Supply chain operations typically require expensive equipment and real estate – trucks and railcars, pallets and containers, warehouses, distribution centers, cross-docks, consolidation hubs, materials handling equipment and supporting IT systems are examples of supply chain overhead. Some of these assets will be owned by third parties; but chances are, there is probably a fair amount on the corporate balance sheet that cannot be written off.

Most of a supply chain's costs, particularly the requirements for working capital, are tied up from the start – they are dictated by the design of the chain. The configuration, size and location of all the elements in the supplier, manufacturing and distribution network determine their own costs. The network also determines the internal and external assets that are required to operate the system and dictates the minimum levels of inventory that it needs to function. Additional work at the operational level more than likely will not influence more than 20% of the cost base.

Real results

A thorough revision of supply chain strategies can achieve significant financial results. Of course, the opportunities vary between firms depending on the nature of their business and the effectiveness of their existing strategies. However, the redesign of the supply and distribution networks (i.e. changing supply, manufacturing and demand locations) can generate up to 3.5% savings of total operating costs.

Evaluating alternative networks that improve cycle time can also facilitate operational improvements. In some cases, inventory reduction of 10–30% can be achieved with the right network and inventory optimization. The design improvements not only come from items stored in warehouses, but also goods in transit over the high seas or road networks. Additional P&L savings are achieved through a

The redesign of the supply and distribution networks can generate up to 3.5% savings of total operating costs.

decrease in inventory-carrying costs when inventory reduction occurs. However, higher inventory levels are sometimes required to improve customer service.

Inventory-carrying costs can account for 18 to 75% of inventory value in different businesses, however most average 25 - 30%. Inventory-carrying costs are not just calculated at the cost of money (6–12%), but also taxes, insurance, warehouse expenses, physical handling and clerical costs, obsolescence, deterioration and pilferage should all be included. Not all these costs are linear – the physical costs of a small increase in inventory may be partially absorbed by spare capacity in the system. A slightly larger increase may require investment in additional space, staff and transportation. Conversely, inventory reduction may allow rationalization of assets and staff.

Redesign, along with other initiatives, can promote the centralization of planning functions. Better planning will improve asset utilization while reducing costs, which would have an immediate impact on the bottom line and potentially raise the level of customer service.

Supply chain teams need to focus their strategic thinking into a coherent, long-term plan whose elements are mutually supportive, as well as amplify potential gains instead of clashing with them. If the primary objective is to improve working capital performance for shareholders (there can be other objectives, especially if an existing supply chain is failing to deliver customer service at any cost) there are a number of key, but interdependent opportunities to consider:

1. **Focus on opportunities to reduce supply chain cycle time** in order to improve the cash conversion cycle and reduce inventory.
2. **Optimize manufacturing planning** by quantity and location to optimize trade-offs between manufacturing, inventory, and distribution costs.
3. **Improve sales and operations planning (S&OP)** processes focusing on demand management to manage variability – promoting efficient supply chain operations.
4. **Integrate sourcing and procurement with supply chain operations.**
5. **Improve asset utilization**, from manufacturing lines to vehicles.

Supply chain methodology undergoes a radical transformation as often as every seven to eight years.

6. **Evaluate operating strategies**, such as the decision to lease, purchase or outsource warehouse, functions or fleets; or trade-offs between working capital and operating strategies.
7. **Balance transportation costs and inventory levels** smaller shipments can mean lower inventory and working capital requirements, but may drive higher transportation costs on the P&L. Understanding appropriate shipment sizes and inventory levels will achieve optimal results at the lowest cost possible.

It is evident these seven areas of supply chain decisions can have significant impact and influence on the overall business and shareholder strategies. However, our experience tells us that most companies underestimate how difficult it is to execute these strategies – they neither have the time nor the resources to execute a plan of this size and scope. Having the right outside expertise and experience is often the missing link needed to accelerate the delivery of long-term, sustainable results.

Jaymie Forrest has 26 years' experience in supply chain operations. Over the course of her career, she has managed more than 100 projects where her expertise in strategic network design, supply chain management technologies, routing planning and dispatch, and distribution execution solutions was applied. Prior to Alexander Proudfoot, Ms. Forrest served as Principal of Neogistics LLC, a supply chain engineering firm specializing in supply chain management, strategies and solutions. She was also Managing Director of the Georgia Tech Supply Chain and Logistics Institute (SCL) where she was responsible for strategic planning and development of industry outreach, research and leadership initiatives.

In addition to her vast experience, Ms. Forrest also was selected as a finalist for Atlanta's 2012 Supply Chain Professional of the Year Award and was recognized as one of the top female supply chain executives in 2013 by *Supply and Demand Chain Executive* magazine.