



Reducing Chaos in Supply Chain

Are you plagued with orders left unfilled, excessive lead times, supplier unreliability's and demand continuing to outstrip supply? If the answer to above questions is yes than you have too much chaos in the supply chain

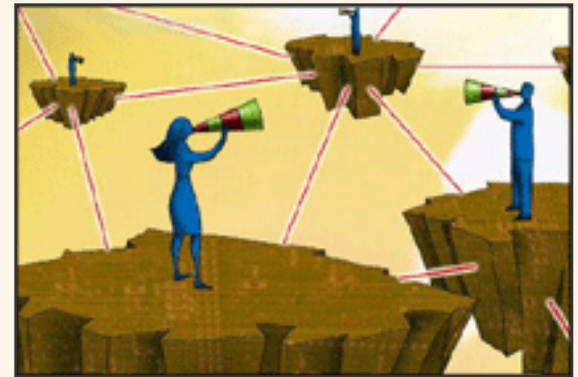
The chaos results from over-reactions, unnecessary interventions, second-guessing, mistrust, and distorted information throughout a supply chain. The well-known "bullwhip" effect, which describes increasing fluctuations of order patterns from downstream to upstream supply chains, is an example of such chaos. This increased chaos will of course lead to higher costs and inefficiencies through over-ordering and "squirreling" of inventory. The existence of chaos in a supply chain also means that it is difficult to make optimal decisions at each stage in the supply chain.

Chaos in supply chain results due to:

Lack of Visibility

Chaos in a supply chain increases when end-to-end pipeline time, i.e. the time it takes for material to flow from one end of supply chain to the other, is long. Associated with pipeline length is the lack of visibility within the pipeline. Hence, it is often the case that one member of a supply chain has no detailed knowledge of what goes on in other parts of the chain. The key to improved supply chain visibility is shared information among supply chain members.

Lack of Control



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In addition to visibility, supply chain confidence requires the ability to take control of supply chain operations. Paradoxically, most supply chains do not have a great deal of control once the order is released. Hence, even if a supply chain manager has visibility of some part of the pipeline, he/she often could not make changes in a short time. For example, even if information is obtained on demand changes or on yield shortfalls, the supply chain manager may be helpless, since the suppliers may not be flexible enough to respond to late changes, or there are no expediting options available, or the production line is inflexible and production schedule changes are not feasible, etc.

Here are a few key levers to Reduce Chaos:

Information accuracy, visibility and accessibility. Throughout the supply chain, key operational metrics and status reports such as inventory, demand, forecasts, production and shipment plans, work in progress, yields, capacities and backlogs should be accessible easily by key members of the supply chain. Such information should be accurate and timely, rendering it useful for all parties for planning and re-planning purposes. Thus, it is important that the key indicators are tightly managed and that any updates are made as timely as possible. The accuracy of the data should be a source of confidence to the parties using the data.

Alerts for out of control conditions. Any time when deviations from the plan have occurred, then the appropriate parties in the supply chain have to be alerted. Here, intelligent controls are needed to determine if the deviations are normal, random events, or if they represented some systematic or unexpected changes that warrant attention. The parallel to statistical process control can be drawn here. A process control chart should be sensitive enough to detect out of control conditions, but not overly sensitive so as to cause the system to be overly nervous, with a lot of unnecessary changes and corrections.

Responsive corrective actions. Each member of the supply chain should have contingency plans and the tools to make corrective actions when out of control conditions have been detected. For example, if the shipment schedules have deviated from plan due to traffic conditions, then there should be clearly defined contingency plans for the logistics carrier to take appropriate actions, e.g. expedite shipments may be used, alternative supply source may be tapped, or product offerings to the customers may have to be changed.

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Two things have changed the landscape of supply chain management in the last few years. The first of these is the availability of the technology and the software to enable the capture and sharing of information across a supply chain - increasingly using extranets. The second, even more fundamental change, is the increasing willingness of members of the supply chain to put aside the traditional arms-length relationship with each other and in its place move towards a closer, partnership-type arrangements

Conclusion

While supply chain chaos tends to paralyze most supply chains, the case is not hopeless. Successful companies are the ones that break the chaos spiral by restoring supply chain confidence throughout the chain. The benefits are much more than cost reduction, but also, as we argued earlier, the reduction of chaos leads to increase in sales and market share, penetration to new markets, and speedy new product introduction.

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