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The Automotive supply chain

Driving commercial performance

As car makers reel from the global economic downturn, many are looking to their supply chains for innovative ways of driving commercial performance. Can closer collaboration with suppliers deliver the necessary results? By Matt Brand

The importance of the automotive manufacturing sector to the global economy is well documented. According to statistics issued by the International Organisation of Vehicle Manufacturers over 70 million cars and commercial vehicles were produced globally in 2008 and over the 10 year period 1995 – 2005 the industry experienced a growth of 30%+.

However, the global economic downturn has taken its toll on the automotive market, with major OEMs experiencing a slump in sales by as much as 40%. Few industries have been as hard hit by the present economic conditions as the automotive sector.

With car sales significantly down, OEMs are looking to cut costs as never before and are turning to their supply chains for cost savings and efficiencies which they hope to achieve through strategic sourcing initiatives, closer collaboration and structural network reconfiguration.

Automotive supply chains have become hugely more complex in recent years as distance between suppliers and assembly plants have increased dramatically, following the trend to globalisation and the sourcing of components from regions of low-cost production. It seems the largest automotive manufacturers in the world are quite literally going to all ends of the earth to find a cheaper piece-price, without necessarily considering the cost implications brought about by increased supply chain complexity.

Although this trend to off-shoring presents a significant array of supply chain and logistics cost challenges, much can be done to realign automotive supply chains for strategic advantage.   There is now a much greater emphasis on the capabilities needed to manage suppliers at a distance. Co-ordination of the flow of key components in an extended supply chain requires good visibility, fine control, flexibility, agility and excellent execution of operational logistics – and that means having first-class processes and advanced IT resources. OEMs are looking to work closely with supplier organisations that can offer a consistent set of processes and solutions that can be replicated on a global basis.

Leading OEMs are seeking to take cost out of their supply chains by rationalising the number of service components to their international operations. Whereas, four separate companies may have been used in the past to affect the transport of goods from source to factory, many are now looking for just one service provider capable of orchestrating transport, freight forwarding, customs brokerage and delivery to final destination. Complexity is reduced, and visibility through one service provider's IT system can take several days off in-transit inventory which may account for millions of dollars in savings.

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Moving to a common platform creates opportunities for OEMs to streamline internal processes on interpreting data and planning. One visibility system enables employees to do tasks that add value to their supply chain rather than wasting time trying to interpret information coming out of disparate systems.

A prerequisite to gaining that visibility is having the ability to track parts globally and importantly, to interpret data quickly. As automotive manufacturers seek to mitigate risk in the supply chain, agility in being able to respond to changing circumstances demands IT that can interpret data swiftly and facilitate an early appropriate response. Having a supply base that is aligned to these aims and properly inter-connected is essential in providing the necessary flexibility and control.

As a general observation, technologically advanced companies tend to want to do business with technologically advanced companies. A problem experienced by a great number of OEMs is in connecting with smaller suppliers' IT systems in order to achieve the visibility necessary to optimise their supply chains. In the near future, suppliers that are not up to speed on their IT will be vulnerable as OEMs seek to modernise their supply base for competitive advantage.

Collaboration, both internally and with external partners, is another important area of consideration. Too often companies work in silos and the result can be a disconnect between purchasing and logistics functions, with the purchasing arm of a company focused on negotiating the best price while paying little regard to achieving the best service. Subsequently it is left to the logistics function to try and obtain the best service offering from the supplier. What is needed is a holistic view. Companies that structure their supply chains on a cross-functional basis and work collaboratively with suppliers to achieve the best overall results.

Interestingly, Japanese auto manufacturers have realised for some time the advantages that come from forging close partnerships with suppliers and customers and this is where industry leading innovation can be seen. Where there is close collaboration, usually there is a lot more innovation in the supply chain.

In North America several leading OEMs are shifting from their traditional, hardened view of keeping 'walls' in place between suppliers and are actively creating more collaborative environments where regular meetings between OEM, 3PL and suppliers are yielding results. Ideas are coming to the 'whiteboard' that are beneficial to all parties concerned. In particular, views are changing on the use of dedicated networks for the transportation of production parts inbound to plants, or aftermarket spares going to dealers. Many OEMs are now looking at the wisdom of having a fixed dedicated network, when maybe sharing that network with competitors makes more sense.

Logistics service providers are in a key position to take a proactive role in encouraging and facilitating a move to shared user services, where appropriate. In Western Europe and the US, CEVA is highly active in talking with a number of OEMs to take waste out of their collective supply chains by sharing a group network. Through such collaboration two important things happen: one, they lower their costs and two; they dramatically reduce their carbon footprint by having fewer half-empty trucks running on the roads. A shared services network is a win-win for everyone.

There are also examples of OEMs in a couple of markets sharing cross-docking facilities. This took close collaboration, but what was realised was that they had trucks coming from the same suppliers for raw production parts going to the same cities, and in some cases, destined for the same factories. This was happening in the aftermarket segment as well.

With the contraction in the automotive market OEMs are looking more closely at ‘in-sourcing’, using their own assets and redeploying workers to logistics tasks, rather than outsourcing to a service provider. OEMs see this as a way of reducing the pain of laying staff off and allows them to retain labour for when demand in the market returns.

However, leading service providers are responding to this short-term shift by expanding core competencies and the breadth of services available. CEVA’s offering in recent years has grown beyond traditional contract logistics services for inbound to manufacturing or aftermarket to, for example, offering international transportation, customs brokerage, forward stocking, vendor managed inventory, sequencing to line, domestic trucking etc., providing a more comprehensive mix of service options for continuity and enhanced flexibility. Sophisticated sequencing programmes and international complete knock-down (CKD) operations demonstrate the expanding skill-sets and widening competency now offered.

By way of example, CEVA runs a $45million CKD operation for a major Japanese manufacturer in Thailand, where hundreds of suppliers deliver components in real-time. On arrival they are categorised, built into kits and then shipped by container to their destination market ready for assembly. Reducing exposure to tariffs in this way is a growing practice and one where service providers can add great value to an OEM’s international business.

In recent years, great strides have been made by OEMs to improving the throughput and flexibility of assembly lines. Advanced sequencing, supported by sophisticated logistics services to the line-side, is now leading practice in most locations around the globe. Complex and finely tuned scheduling of these operations by the OEMs - in close collaboration with suppliers and logistics service providers - has helped the move to the simultaneous building of multiple models on the same line.

But perhaps the greatest challenge facing the automotive industry is the basic premise on which the industry plans and produces cars. Although the sector operates the most complex and sophisticated supply chains, drawing material and components from a wide variety of sources and geographical locations – and brings them together in highly sequenced operations within finely timed windows – the industry still has room to improve on reducing finished vehicle inventories in many mature geographies.

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In the US in particular, vast inventories of finished goods are parked on sales lots awaiting a buyer. In Europe, this inventory is more evident at the ports.

Reducing these large inventories of finished cars is going to take a strategic shift in mind-set - building vehicles to order, rather than to stock. This may well mean that the customer has to wait a short while for his or her new car, but with good planning customer satisfaction can be retained while vastly reducing money tied-up in finished inventory.

Only by working in close collaboration with a lead logistics service provider, and key suppliers, at a strategic level can OEMs achieve the structural changes needed to take cost out of the automotive supply chain. Delivering strategic change of this complexity requires strategic collaboration.

Matt Brand, Senior Vice President and Global Automotive Director, CEVA