Supply Chain Complexity Across the Automotive Supply Chains

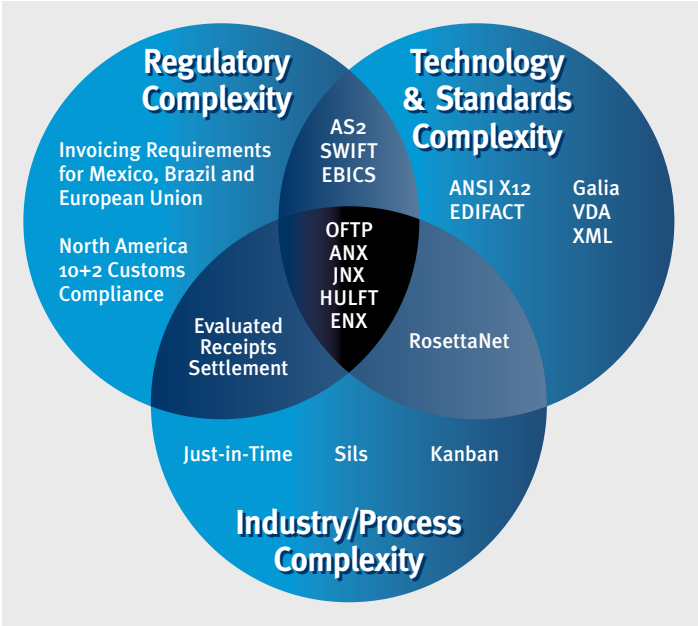
Today's supply chains are very complex. Suppliers have to service customers in different industries, across many different countries around the world, and with many different B2B e-commerce. Globalization of the manufacturing industry has only served to increase supply chain complexity still further. Multi-national companies need to work across different time zones, support different languages and work across different cultures. It can take a significant amount of time to map out how many different standards and processes customers are asking their suppliers to support. On the surface things may appear straightforward, but underneath, process and technology complexity can increase significantly, very quickly.

Supply chain complexity can be measured in many different ways. Nonetheless, manufacturers need to take steps to simplify business processes, consolidate technologies and introduce improved efficiencies right across their downstream supply chain.

One of the key mandates of any company is to improve customer satisfaction levels, but does that mean that a supplier has to support any new B2B e-commerce standards and supply chain processes outlined by their customer? The short answer is "Yes." Suppliers typically work with many different customers, each of which has a unique set of business processes and rules that the supplier must adhere to. The automotive and high tech industry sectors utilize some of the most diverse set of standards and business processes of any industry sector. The following example shows how customer centric supply chains can become very complex, very quickly.

Scenario 1

A supplier in the high tech industry based in Europe manufactures in-car infotainment systems for two automakers OEM1 and OEM2. OEM1, based in Tokyo Japan, and OEM2 is based in Detroit, North America. This looks at first glance to be fairly straight forward, one supplier supplying two customers, but the demands of these customers are very different. The following diagram maps out the complexity of the supplier's sell side value chain by focusing on three degrees of complexity, regional, technology/standard and industry/process.



Has recently replaced their in-house ERP system with a system from SAP. OEM1 has asked all their suppliers to exchange business documents using either the HULFT, a popular Managed File Transfer package in Japan, HTTPS or JNX (the Japanese Networking Exchange). OEM1 is connected to the Japanese Network Exchange (JNX), a private network for automotive companies based in Japan. OEM1 is a high volume car manufacturer and they use Just-In-Time (JIT) production techniques. Supplies must be delivered to their plants within a specified time slot. An Advanced Shipment Notice must be sent to the OEMs to notify them that goods are enroute to the plant. The OEM prefers to send and receive documents in either EDIFACT and OAG XML BODs.

Scenario 2

OEM2 has manufacturing plants in North America, Mexico and Europe. The automakers have just standardized their global ERP platform on Oracle including a recent Oracle's Transport Management System implementation. As OEM2 has additional plants in both Mexico and Europe, there is complexity around supporting customs and tax compliance in these regions. All goods entering North America must now meet the new 10+2 customs compliance standard. OEM 2 uses the Evaluated Receipt Settlement (ERS) process with their North American operations in order to simplify payments processing with suppliers. OEM2 manufactures high end premium vehicles with a build to order model. Different vehicles need to be assembled on the same production line. Supply In Line Sequence (SILS) production techniques are used to supply different components depending on which type of vehicle is coming down the line.

In North America they would prefer payments to be made through the SWIFT banking network using the ISO 20022 XML messaging standard. OEM2 has been using OFTP communications over the ENX (European Network Exchange) and EDI VANs in Europe. In North America, OEM2 has used AS2 and ANX (Automotive Network Exchange). However the IT organization would like to consolidate on to the new OFTP2 internet standard across all their plants in the near future. EDI messaging standards such as ANSI X12 and EDIFACT will continue to be used for the document exchange.

Both examples highlight the numerous regional, technology, process standards that must be adhered for different OEMs. Of course, sending and receiving EDI documents in the right format, at the right time and at the right location is just one of the many challenges automotive suppliers confront. Varying regulations, regional EDI standards and third party vendor connectivity, complicate the challenge of B2B connectivity for global automotive suppliers operating in numerous countries. Preferences by large OEM's to "do business my way," compound the challenges even further.

Automotive suppliers that wish to grow business with various OEMs around the world will need to manage the growing complexity of regional and customer-specific technology integration requirements. More companies are considering pushing the complexity to the cloud with a third party managed services provider performing all of the B2B integration functions on their behalf. GXS Managed Services offers a flexible and scalable B2B infrastructure to address the regional, process and technology complexity in today's customer centric supply chains.

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