

This essay will compare and contrast Ford's supply chain management model with Dell's, including challenges and issues surrounding the 2 approaches, areas of compatibility, and ways in which Ford can leverage directly from Dell's SCM success.

In efforts to cope with fluctuations in market demands and supply chain uncertainties, both Ford and Dell have implemented highly sophisticated enterprise resource planning (ERP) networks to share information between parts suppliers, assembly areas, and distribution facilities. Dell is very adept at using its technical resources to communicate backward with suppliers, and has created a competitive advantage in its industry by using the Web to communicate directly forward with customers.

The products of both Ford and Dell are driven by innovation, however Dell's online sales model is one of very rapidly (4-6 days) pulling together the components necessary to meet individual customer requirements; whereas, most of Ford's innovations and new features are pushed to customers as standard makes and models, with custom features that change only yearly, and with lead times for custom features that may stretch to weeks. Dell's supply chain model, therefore, is capable of being highly responsive to the changing and unpredictable demands of individual customers on the front end, with build-to-order and agile processes, while minimizing the back-end risk of supply disruptions. Ford's supply chain model, on the other hand, is termed "efficient" in that they strive to eliminate non-value added activities, and use economies of scale and to optimize capacity utilization in production. Reducing capacity to

meet lower demand for its vehicles is Ford's "No. 1 priority", according to CEO Alan Mullary (2006). While Ford has also established information linkages with vendors to better ensure efficient, accurate and cost-effective flow of parts, the vastly more complex processes for building an automobile than for assembling a computer, create lead times along almost every link in Ford's supply chain that make both forecasting and control far more complicated and uncertain than that of Dell's supply chain. Several of the supply chain differences are:

Dell	Ford
- Few suppliers at one tier	- Numerous suppliers at different tiers
- Modular and standardized parts	- Lots of unique parts
- Short lead times	- Long lead times
- Few design variations	- Numerous design variations
- Skips distribution in direct Internet sales	- Distribution to dealers integral to supply strategy. Internet strategy unsuccessful (Eisenstein, 2003)
- Builds a computer only after order is received	- Products are built far in advance of sales.
- Pays for parts after receiving payment for end product	- Parts are purchased weeks or months in advance of assembly/sale.

If there is one operational area that even a company as horizontally structured as Ford can emulate from a virtually integrated company such as Dell, it is to vertically integrate its information technology resources, so that the consolidation, warehousing and provisioning of supply chain data to its suppliers, manufacturing entities and distributors is centrally managed, using indigenous

resources (Novak and Stern, 2006). Despite all of Ford's efforts during recent years to better share information among all entities within the supply chain, there is still a critical need to smooth out the order process toward better ensuring that Ford builds and delivers a vehicle on time and at budget. According to CIO Nick Smither (2003), the way to achieve that objective is by dramatically shrinking the number of outsourced information technology suppliers, and taking back from outside contractors most of Ford's IT operations. Traditionally, most of Ford's information technology work was outsourced across approximately 200 different suppliers. Vertically integrating many of its technical functions has already saved Ford \$12 million in annual manpower costs, and will save more as Ford moves closer to its 70 percent in-sourcing goal (Keller, 2003).

A second objective of consolidating most of Ford's IT resources in-house, similar to Dell's model, is to deliver design and marketing information straight into purchasing and manufacturing, as well as into the finance function, so that the cost of purchasing parts and building products can be better forecast. "The integration across functional boundaries can help us optimize the business system to where ... we're getting the advantages from technology today, versus the more group or departmental level advantages that we got a decade ago with the technology", says Smither (2003). "All IT work now is targeted toward improving quality and reducing the resources required to deliver new products, saving up to \$700 per vehicle", says Smither (ibid). "Every single area that would make Ford competitive again, from marketing to manufacturing, would be IT-driven."

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