



ESSENTIALS OF Management Information Systems

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Chapter 9: E-Commerce: Digital Markets, Digital Goods

Case 2: Ford AutoXchange B2B Marketplace

Tags: Ford; B2B markets; supply chain management; electronic markets;

Summary


This is a fascinating story on a B2B "electronic marketplace" initially developed by Ford called AutoXchange. In this vision of B2B commerce, the Internet would transform the relationship between over 100,000 tier 1 and tier 2 auto parts suppliers, and a small handful of very large, global automobile companies. In this electronic marketplace, thousands of suppliers would compete against one another to provide parts to the auto industry giants. In this way, the auto industry hoped to reduce the cost of parts, increase quality, achieve greater flexibility, and rationalize the supply chain process. Ultimately, the effort failed. Find out why. L= 4:58

URL: <http://www.youtube.com/watch?v=qyO9QSo0FjU>



Case

"The automotive industry designs, develops, manufactures, markets, and sells the world's motor vehicles. In 2007, more than 73 million motor vehicles, including cars and commercial vehicles were produced worldwide. In 2007, a total of 71.9 million new automobiles were sold worldwide: 22.9 million in Europe, 21.4 million in Asia-Pacific, 19.4 million in USA and Canada, 4.4 million in Latin America, 2.4 million in the Middle East and 1.4 million in Africa. The markets in North America and Japan were



stagnant, while those in South America and Asia grew strongly. Of the major markets, Russia, Brazil, India and China saw the most rapid growth.

About 250 million vehicles are located in the United States. Around the world, there were about 806 million cars and light trucks on the road in 2007; they burn over 260 billion gallons of gasoline and diesel fuel yearly. The numbers are increasing rapidly, especially in China and India.


General Motors, Ford and Chrysler are not only by far the largest automakers in North America, they were for a while the largest in the world and are still a mainstay in the top ten. Ford has held the position of second-ranked automaker for the previous 56 years, being relegated to third in North American sales, after being overtaken by Toyota in 2007.

Ford Motor Company (NYSE: F) is an American multinational corporation and the world's fourth largest automaker based on worldwide vehicle sales, following Toyota, General Motors, and Volkswagen. Based in Dearborn, Michigan, a suburb of Detroit, the automaker was founded by Henry Ford and incorporated on June 16, 1903. In addition to the Ford, Lincoln, and Mercury brands, Ford also owns Volvo Cars of Sweden, and a small stake in Mazda of Japan and Aston Martin of England. Ford's former UK subsidiaries Jaguar and Land Rover were sold to Tata Motors of India in March 2008.

In 2007, Ford fell from the second-ranked automaker to the third-ranked automaker in US sales for the first time in 56 years, behind General Motors and Toyota. Based on 2007 global sales, Ford fell to the fourth-ranked spot behind Volkswagen. Ford is the seventh-ranked overall American-based company in the 2007 Fortune 500 list, based on global revenues in 2007 of \$172.5 billion. In 2007, Ford produced 6.553 million automobiles and employed about 245,000 employees at around 100 plants and facilities worldwide. Also in 2007, Ford received more initial quality survey awards from J. D. Power and Associates than any other automaker. Five of Ford's vehicles ranked at the top of their categories and fourteen vehicles ranked in the top three.

While the global auto industry is very large by any standard, generating nearly \$1 trillion in sales worldwide each year, the size of the auto supplier industry worldwide is equally impressive. There are an estimated 250,000 direct suppliers to the auto industry worldwide, with about 100,000 suppliers in the U.S. alone. Coordinating the flow of parts and sub-assemblies (transmissions, differentials and axles, and sheet metal) is a massive, and very expensive task.

Ford's AutoXchange was one of the first efforts to develop a large scale B2B (business-to-business) electronic marketplace for the automobile industry. In the end, it did not succeed, at least not in the form proposed in the video. Why it did not succeed is an interesting story of how mistakes in understanding industry supply chains led to poorly conceptualized information systems which ultimately did not work. While the effort to build industry-wide electronic marketplaces largely failed (and not just in the auto industry), the ideas and technologies were later used by individual firms separately. Today, private firm industrial networks (owned and operated by individual firms who invite a select group of suppliers to participate) are commonplace.



Ford's AutoXchange was a grand vision of how Internet technology would overcome competitive pressures in an entire industry, and entice thousands of industrial supply businesses into an online, competitive marketplace where prices would be driven down through the workings of a transparent, online marketplace much like the stock market. The idea was quite simple: build a digital marketplace which was open, transparent, and competitive to benefit the large buyers of automotive parts.

These marketplaces were referred to as "B2B Markets" because they brought together suppliers businesses with purchasing businesses and did not involve the consumer. Ultimately this vision of open B2B markets came up against some powerful institutional forces. As it turns out, no rational business (or management team) wants to be a seller in an open, transparent marketplace where price is the most important and visible criterion of success. As a result, suppliers to these kinds of open digital markets often refused to participate.


While the broad vision failed, many of the technologies developed in this effort were re-deployed by the companies involved, and survive today as private supply chain networks operated by the major car manufacturers.

Your task in this case is to figure out why the original vision did not work out as planned, and what this tells you about the role that organizational and institutional factors play in the deployment of large technology projects.

One grand vision of the dot com era was an open transparent marketplace where thousands of suppliers would compete against one another to sell their products to a few giant purchasers. "A consortium of buyers can exert considerable influence on a common supply chain. In 1998 GM set up a B2B (business-to-business) exchange for its auto parts suppliers, initially called TradeXchange. The idea was to streamline production by sharing information electronically. At the time GM was spending about \$87 billion a year on raw materials, vehicle parts, and MRO (materials, repair, and operating) supplies with its roughly 30,000 suppliers. GM would provide specifications and information on inventory and manufacturing schedules and suppliers would provide information on price and delivery capability. Trade Xchange supported an on-line catalog, a bid-quote process, or an on-line auction. Part of GM TradeXchange allowed suppliers to solicit bids for their raw materials, potentially cutting their costs. In the first two months of operations, GM sold stamping presses in two online auctions, reaping more than \$2 million in sales, and purchased more than \$1.7 million in materials from supplier catalogs posted on the site.

As described in the video, Ford created a similar exchange called AutoXchange with of course different software, formats and interfaces. To solve this problem for their common suppliers Ford, GM and DaimlerChrysler announced in February 2000 that they had agreed to join together to create a single B2B supplier exchange called Covisint. The three firms had combined annual spending of \$240 billion.

The Federal Trade Commission started an informal antitrust review of the Big Three exchange but soon gave it clearance. In April 2000, French automaker Renault S.A. and Nissan of Japan joined. Also among the founding firms were Commerce One, GM's technology partner in TradeXchange and Oracle Ford's technology partner in Auto-Xchange. In April 2001 Kevin English was named Chairman, President and CEO of Covisint.



Industry observers at the time wondered whether the two companies hired to move all of Ford and GM's suppliers online had what it takes to get these huge projects up and rolling by the first quarter of the next year, as both promised. The feat not only required enormous commitment from suppliers, which will need to be convinced they can save money, but also huge technology and applications-hosting capabilities from the companies picked for the jobs: Oracle and Commerce One. Neither of these companies had ever built such a huge online trading platform.

Suppliers to the major auto OEMS felt that the Covisint was not intended to optimize the supplier chain but rather was just the latest tool to squeeze revenue from suppliers. They were particularly hostile to the online auction. There was friction between the OEMs and also technical difficulties due to differences in legacy systems. Outside observers felt that the big three were more interested in the market capitalization of Covisint than in their supply chains. Covisint never achieved the level of success envisioned. In December 2003 Covisint sold the online auction portion of its business to FreeMarkets Inc, which agreed to merge with Ariba soon after. In March 2004 Compuware acquired the products and technology of Covisint, LLC. It is believed that Covisint had about \$25 million in annual revenue and around 135,000 users."

But the ideas and technologies for creating online networks which individual firms can use to communicate and collaborate with their suppliers are alive and well. There are few "open" networks where thousands of suppliers compete with one another, but there are many "invitation only networks" where a few trusted suppliers are allowed entry. All the major automakers now operate these kinds of private networks. Price competition is usually not present, and the emphasis is on quality, just-in-time delivery, and flexibility.


Resources

Kenneth Laudon and Carol Traver, *E-commerce. Business. Technology. Society. 5th Edition*. 2009. See Chapter 12, "Volkswagen Builds B2B Marketplace."; wikipedia.com; Ford.com.

(see: http://www10.edacafe.com/nbc/articles/view_weekly.php?articleid=209168).

Case Study Questions

1. Who do you think would pay the cost for suppliers to put their parts catalogs onto these marketplaces like AutoXchange? Who should have paid costs?
2. What were the benefits of these systems and who would reap them?
3. Why did the Federal Trade Commission open an investigation of these marketplaces?
4. What role do you think the technology played in the demise of these systems?
5. Why would more "closed" private market places be attractive to both the industry giants who buy the parts, and the suppliers?



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