Automotive industry and dell

Business, Industries

Teri Takai, Director of Supply Chain Systems, has been asked what sounds like a relatively narrow question by the company's most senior executives: How should Ford use Internet technologies to improve the way it interacts with suppliers? Students quickly realize, however, that the question requires broad discussion and is surprisingly difficult. To answer it, Ford needs to think about relationships not only with suppliers but also with dealers and customers.

As Supply Chain Systems staff members study the Dell model in particular, they come to appreciate that " virtual integration" must include design of fulfillment, forecasting, purchasing, and a variety of other functions that had long been considered separately within the Ford hierarchy. The question is in fact explosive in its implications, because it inevitably leads to fundamental questions about the way Ford has historically operated internally and how it has interacted with important partner constituencies (including dealers).

Takai's staff is divided on what the recommendations should be. Members of one group are enthusiastic about the possibilities and think the only appropriate way to answer the question is to consider, evaluate and recommend radical changes to Ford's overall business model; this group considers Dell a serious model for Ford's business. Another group is more cautious and believes that the fundamental differences between Dell's industry and Ford's industry necessitate significant differences in business models.

Takai must consider the inputs of her staff (provided as case exhibits) and decide what to recommend to her senior managers, including the CEO, who

has taken a special interest. Students are asked to consider Takai’s choices and recommend a way for her (and Ford) to move forward.

Background Reading

This case is intended to be used in combination with “ The Power of Virtual Integration: AnInterviewwith Dell Computer’s Michael Dell,” by Joan Magretta, HarvardBusiness Review, March-April 1998, pages 72-84 (available as a reprint from Harvard Business School Publishing). During the actual debate within Ford, this article served as a primary source document. It is an excellent means of introducing students to the direct model of business against which Ford was evaluating its own way of operating. Several other HBS materials might also add value in classroom discussion, depending on the teaching emphasis you intend.

Some of these include: •“ Dell’s Working Capital,” by Richard Ruback and Aldo Sessia, HBS case No. 201-029 (financial working capital management focus); •“ Matching Dell,” by Jan W. Rivkin and Michael E. Porter, HBS case No. 799-158 (strategy focus, including computer industry competitor’s strategy); •“ Dell Online,” by V. Kasturi Rangan and Marie Bell, HBS case No. 598-116 (marketing distribution channel management focus). Events in the auto industry since the time of the case might provide an additional reason to add supplemental readings, depending on your objectives in teaching this case.

Purpose

At the Harvard Business School, this case has been used in first and second year operation courses for MBAs and also in IT-oriented executive programs.

The primary purpose of the case is to convey an understanding of issues that surroundtechnologyenabling of supply and fulfillment chains, and to directly confront the difficulties of incumbent firms as they struggle to re-engineering complex legacies (systems, physical facilities, historical baggage in relationships with partners, etc).

The issues addressed by the case are listed below in order of increasing subtlety. Executives of advanced MBA students might require less time on the more basic issues. First, by comparing Ford and Dell, the case helps students develop a fuller appreciation of the potential for partner conflicts that arise as incumbent firms move to procuring and selling via the web. Ford's independent dealers, for example, are worried about losing sales to new Web-based channels and so might oppose certain uses of the new technologies.

Suppliers are worried about costs of developing web capabilities and about the implications for the kind of information sharing that more direct models seem to involve (historically, sharing information with automakers has seemed to suppliers like a recipe for lowering their own margins). Students will realize that the factors are either absent or less consequential in Dell's business. Second, the case provides an opportunity to learn about the direct model and to understand in benefits. By discussing how Dell makes and delivers its products, students explore direct mode concepts (e. g., inventory velocity).

One challenge that Dell faces that is not salient for Ford is the rapid obsolescence of its products and of components in inventory. Students must decide whether this difference diminishes the relevance of Dell's direct

model to Ford’s business. Third, the case prompts students to consider the problems of connecting to suppliers and other external parties who tend to be less technologically advanced than the subject company. For a variety of reasons, this is more of a problem for Ford. The importance of common industry technology standards can be discussed (the auto industry’s attempt at this is called “ the Automotive Network Exchange” or “ ANX”).

Fourth, the case illustrates the challenges of forecasting what customers will buy. Once again, Dell’s world is simpler than Ford’s. Most of Dell’s sales are direct to large customers who can be canvassed concerning the future needs. Ford, because of its independent dealer network, does not even own the data it needs to forecast sales, and there are multiple issues that can arise in forecasting and delivering on forecast in an industry with such a long and complex supply chain.

Fifth, and most important, the case serves as a basis for discussion of the difficulties of implementing a true build-to-order (BTO) model for so complex a product as an automobile. The auto industry has announced intentions to move toward BTO models, but the roadblocks in the way are formidable. As one looks more closely at the complex auto supply and fulfillment chains, one realizes that BTO is, in fact, a matter of degree, and that much can be achieved that adds value that is well-short of the pure Dell model. For example, by improving visibility into supply chains and making heavy use of vehicle sequencing and “ locate-to-order” mechanisms, auto companies can realize many of the benefits of BTO without totally revamping infrastructures to support BTO.

Identifying and discussing the incremental steps an automaker might take on the way to BTO can be a rich and highly useful exercise, especially in sessions with executives. Finally, this case can serve as a preamble to a discussion of buyer exchanges, supply chain analytics and optimization technologies, and other business concepts that have received significant attention (and investment) in recent years.

Assignment Questions

1. Consider the experiences that you (or your friends or members of yourfamily) have had in buying a car; compare these to the experience of buying a computer online (if you’re never done this, go to Dell’s website – www. dell. com – and explore how online computer buying works). What do you think explains the differences? 2. What advantages does Dell derive from virtual integration? How important are these advantages in the auto business? 3. What challenges does Ford face that are not also faced by Dell? How should Ford deal with these challenges? 4. If you were Teri Takai, what would you recommend to senior executives? To what degree should Ford emulate Dell’s business model?