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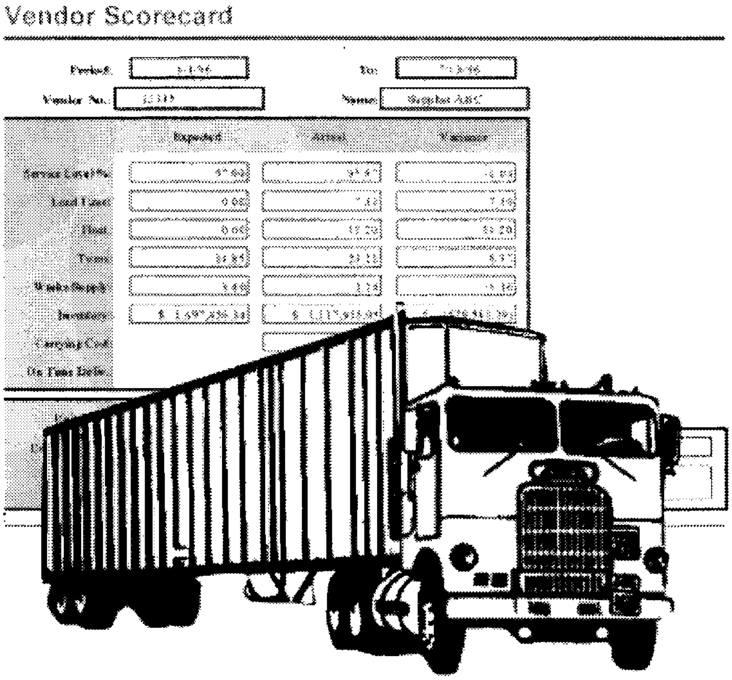
Retail Logistics & Merchandising

Requirements in the Year 2000



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Executive Summary

This report addresses the overall "order fulfillment process" between manufacturers and their wholesale/retail customers. The overarching goal of this study is to improve the understanding of retailers' expectations — both current and in the future — of the requisites of order fulfillment. As employed in this report, "the order fulfillment process" refers to all logistical and distribution functions beginning with the placement of an order by a retailer and concluding with the delivery of the order by the vendor to the retailer distribution center and/or stores.

A review of the trade press and academic journals identified the relevant distribution practices, trends, and technologies as well as the key retail companies that appear to be leading the way with important new order fulfillment initiatives. The subsequent analysis of these issues involved the collection of primary data in a two-part methodology. From a national, representative sample of retailers in three classes of trade (food, drug and mass merchandising) primary data were collected in two distinct and reinforcing waves: 1. personal interviews; and 2. two written mail surveys targeted toward merchandising and distribution personnel within retail firms.

In total, the research study included 54 different retail respondents, from the three principal retail trade channels: mass merchandising, drug and grocery. Together, these retail companies supply over 28,000 stores in all 50 states, and represent 1996 industry sales of approximately $320 billion.

As retailers look ahead toward 2000, their expectations of suppliers continue to intensify. Technological readiness will drive virtually all retailer expectations of suppliers. The use of Electronic Data Interchange (EDI) will become an industry mandate; those vendors who want to be the number one or two partner in a category will be technologically sophisticated. This technological readiness will dramatically reduce order time while improving invoice accuracy — an edict clearly voiced by retailers. Communication via computers and phone lines will not, however, preclude human contact. Within the retail organization, multifunctional teams are quickly becoming the norm in an attempt to create a more seamless flow of communication between the merchandising and distribution functions of the business. Finally, as suppliers and retailers look ahead, the formation of mutually beneficial partnerships will dominate. Collaborative problem solving culminating in jointly profitable solutions within the order fulfillment process will improve efficiency, add value, and lower costs for retailers, vendors, and ultimately consumers.

Acknowledgments

Over 50 leading retail companies participated in this study. Many "best practices" retailers are building a competitive advantage by developing innovative distribution systems and efficient logistics practices sooner or better than their competitors. Accordingly, we assured all interview and survey respondents complete confidentiality. Thus we have not identified the sources of many comments and information presented in this report.

This report, however, could not have been completed without the endless patience of hundreds of retail industry executives. We are grateful for their interest, cooperation, and genuine concern for improving their industry performance.

Lastly, we wish to thank the sponsor of this study, Bausch & Lomb. From the onset of the project, Bausch & Lomb executives emphasized the importance of conducting an independent and objective analysis illuminating issues which retail companies are considering, or should be considering, as they develop future logistics, merchandising, and distribution strategies. We appreciate the high level of support and confidence shown by these executives in the conduct of this research project.

Table of Contents

Executive Summary I

Acknowledgments II

Table of Contents III

List of Tables IV

List of Figures IV

List of Exhibits VI

1 Introduction 1

Background 1

Study Goals & Objectives 2

2 Methodology 5

Respondent Profile 5

3 Empirical Results, Analyses, & Strategic Implications 9

The Order Fulfillment Process 9

- Responsibility in Order Fulfillment 9
- Multifunctional Teams 11
- Characteristics of the Order Fulfillment Process 13
- Strategic Implications & Perspectives 14

Information Systems & Order Fulfillment 17

- Current & Expected Use of Technology 17
- Strategic Implications & Perspectives 20

Transportation, Carrier, & Inventory Practices 22

- Transportation Arrangements 22
- Invoice Problems 24
- Less than Full Loads 26
- Strategic Implications & Perspectives 26

Overall Vendor Performance Expectations 28
    Guidelines & Services 28
    Strategic Implications & Perspectives 30
Benchmark Companies and Partnerships in Order Fulfillment 32
    Creating Customer Value 32
    Strategic Implications and Perspectives 34
4 Summary & Conclusions 37
The Order Fulfillment Process 37
Information Systems: Their Role in Order Fulfillment 37
Transportation, Carrier, and Inventory Practices 38
Overall Vendor Performance Expectations 38
A Trade Association Sponsors 41
B Excerpts From a Major Retailer's Statement 43
C Merchandiser Survey 47
D Distributor Survey 61

List of Tables

Table 1. Selected criteria on which performance is evaluated, by position. 12

List of Figures

Figure 1. Merchandisers' indications of product ordering responsibility by order type 9
Figure 2. Distributors' indications of product ordering responsibility. 11
Figure 3. Percentage of merchandising and distribution executives who report having multifunctional teams. 12
Figure 4. Degree of automation of the "reorder fulfillment" process. 13

Figure 5. Order cycle time by type of item; 1996 and year 2000. 14

Figure 6. Preference for product movement data. 14

Figure 7. Use of technology as a percentage of total company volume; 1996 and year 2000. 17

Figure 8. Utilization of EDI transmission as a percentage of total company volume; 1996 and year 2000. 18

Figure 9. Product demand forecasting responsibility. 19

Figure 10. Use of source tagging. 19

Figure 11. Who pays for source tagging? 20

Figure 12. Retailers' views on who will apply source tags. 20

Figure 13. Who pays the freight? 23

Figure 14. Distributors' preferences for who schedules appointments. 23

Figure 15. Distributor indications of who selects transportation carriers. 24

Figure 16. Percentage of HBC orders delivered with specific problems as indicated by merchandisers. 24

Figure 17. Causes for late orders as indicated by distributors. 25

Figure 18. Current and expected policies regarding when to pay supplier invoices. 25

Figure 19. Distributor indications of who traps loads. 26

Figure 20. Does your company have formal vendor performance guidelines? 29

Figure 21. Merchandiser requirements for specific vendor services. 29

Figure 22. Distributor requirements for specific vendor services. 30

Figure 23. Benchmark companies in order fulfillment. 34

Figure 24. Importance of supplier attribute to merchandisers for determining benchmark status. 35

List of Exhibits

Exhibit 1. Organizational Chart Depicting Relevant Marketing/Merchandising and Distribution Functions for a Typical Retail Company 7
Exhibit 2. Flow Diagram for New Product Decisions for a Typical Retail Company 10
Exhibit 3. Actual Vendor Scorecard for Multi-Region Retailer XYZ 16
Exhibit 4. Standard Vendor Agreement Non-Compliance Fee Schedule 28
Exhibit 5. Vendor Responsibilities as Given by a Major Retail Company 31
Exhibit 6. Vendor Distribution Evaluation Criteria as Given by a Major Retail Company 31
Exhibit 7. Vendor Marketing Evaluation Criteria as Given by a Major Retail Company 32
Exhibit 8. Example of a Vendor Scorecard 33

Section
1 Introduction

As changing consumers and changing technology alter the way consumer product manufacturers and retailers go to market, conventional theory and practice at every stage of the evolving distribution systems are being critically re-evaluated. At the retail level, increasing competition for often no-growth markets has emerged from a variety of non-traditional grocery operators — mass merchandisers, deep discount drug stores, warehouse clubs and supercenters, to name a few. Such blurring of traditional channels has led retail operators and suppliers alike to review many of the basic assumptions underlying their businesses in search of cost reduction and profit enhancement opportunities. These initiatives have become especially important given the increasing consolidation and management sophistication of both manufacturing and distribution companies coupled with the greater demands placed on individual item performance as a result of new product proliferation and various category management initiatives.

The majority of retailers have adopted two general, often opposed, categories of response: strategies to add value and strategies to reduce costs. The stakes are large. The best retailers recognize that they are not capable of achieving their strategic goals alone. Manufacturer partners are essential. Two key questions remain: on what criteria will retailers select these leading business partners, and what are the expectations that retailers place on these partners, now and in the future?

This report addresses these key strategic questions, particularly with respect to the overall "order fulfillment process" between manufacturers and their wholesale/retail customers. As employed in this report, the order fulfillment process refers to all logistical and distribution functions beginning with the placement of an order by a retailer and concluding when the order is delivered by the vendor to the retailer distribution center and/or stores.

The order fulfillment process is central to the grocery industry initiative, Efficient Consumer Response (ECR), which attempts to eliminate unneeded and redundant costs from grocery distribution channels. As such, an enhanced understanding of current order fulfillment practices and expectations regarding how they will change in the future will make an important contribution to both retailer and supplier efforts to make their distribution systems more responsive, more efficient and to improve the overall performance of the grocery distribution system.

Background

Although consumer product companies have clearly been concerned with minimizing the costs of their distribution systems since at least the beginning of the 20th Century, it wasn't until the early 1990s that industry leaders formed the Efficient Consumer Response (ECR) working group. In January 1994, the results of their first investigation was formally announced at the Food Marketing Institute Mid-Winter meeting. At that time, it was estimated that as much as $30 billion dollars could be eliminated from the grocery distribution system through more coordinated retailer-supplier efforts. Much of this $30 billion was being wasted, the report indicated, because of inefficiencies in product assortment, product introductions, promotions, and replenishment.

The industry response to the call for ECR has been overwhelming. Virtually every major grocery industry company has re-examined its own internal and external practices to determine the opportunities for greater efficiencies. An interindustry committee was convened — The Joint Industry Project on ECR, whose philosophy was to provide better value to the consumer by improving products and assortment while lowering cost. The committee's specific long run goal was to provide individual companies with tools and information on ways to deliver increased consumer value.

Resultantly, the joint industry committee commissioned a series of reports, each overseen by a subcommittee, to identify and document best practices in a wide range of activities that would contribute to a more efficient grocery pipeline: from continuous replenishment and integrated electronic data interchange (EDI) to transportation and computer assisted ordering (CAO). The many publications resulting from these projects are available from any of the trade associations which together sponsor the Joint Industry Project on ECR (see Appendix A).

As the overall ECR effort is a vast attempt to align raw material sourcing and manufacturing decisions at the beginning of the grocery distribution pipeline with consumers' purchase decisions at its end, the project requires many separate components. This particular study focuses on the middle links of the chain: all those functions involved with order fulfillment as defined above. Whereas many of the reports issued by various industry committees provide useful guidelines and examples of "best practices," they often do not provide specific benchmarks, nor do they attempt to project the status of certain key practices for the future. Yet if the industry is to progress — this is particularly true for individual companies — information is needed regarding both the current state of ECR practices across the industry and how these specific requirements are likely to evolve in the future.

A great deal of attention has been given to the important topic of "customer satisfaction" in recent years. Most analyses agree that for highest levels of customer satisfaction, buyer-seller partnerships are needed that address the totality of the business relationship. This study contributes directly to goal of improving customer satisfaction, specifically retailers' satisfaction with vendor performance, but its focus is limited to order fulfillment only, not on the entire business relationship. Many important dimensions of the business relationship--product quality, consumer advertising, in-store promotion, etc.--are explicitly excluded from this study.

Study Goals & Objectives

The study upon which this report is based had the overarching goal of improving the understanding of retailers' expectations, both current and in the future, of the requisites of order fulfillment. A number of specific objectives are enumerated:

1) to describe the typical corporate hierarchies internal to retail organizations in which the order fulfillment must take place;

2) to identify the individuals in retail organizations who influence the order fulfillment process, both in the merchandising and distribution divisions;

3) to identify how retail organizations typically measure the performance of these key decision makers;

4) to identify the extent of retailers' preferences for various performance enhancing distribution practices and use of electronic technologies now and in the future;

5) to document how retailers measure suppliers' performance relative to order fulfillment;

6) to forecast how retailers expect all of these key factors to change in the future.

This report should provide value for both retailers and their vendors. Retailers, on one hand, have an interest in comparing what they currently do, and how they expect to change with the benchmarks that this report establishes for other retailers in other marketing channels. Vendors, on the other hand, need to know what their customers require in terms of order fulfillment protocols and, more importantly, they need to know how these customers are expecting to change these requirements in the future. Such information is essential for much needed firm-level planning. Leading vendors will begin now to prepare for the changes that this report identifies.

Section 2 Methodology

Review of the current trade press and academic journals identified relevant distribution practices, trends, and technologies, as well as the key retail companies that appear to be leading the way with important new order fulfillment initiatives. The subsequent analysis of these issues involved the collection of primary data in a two-part methodology. From a national, representative sample of retailers in three classes of trade (food, drug, and mass merchandising) primary data were collected in two distinct and reinforcing waves:

1) Personal visits were made to the headquarters and/or warehouse location of 15 key wholesale/retail customers. The goal of these visits was to develop an in-depth understanding of the entire order fulfillment process in that organization and industry segment, including the identification of the key actors and especially their current and future expectations of suppliers. In each of these companies, a full day of executive interviews with individuals representing multiple functional levels was conducted. Top tier firms were selected in roughly equal numbers from each of the food, drug and mass merchandising channels. These personal interviews, which took place throughout the research process were instrumental not only in identifying the relevant topics and issues of current concern to retailers, but also in interpreting the results from the mail survey below.

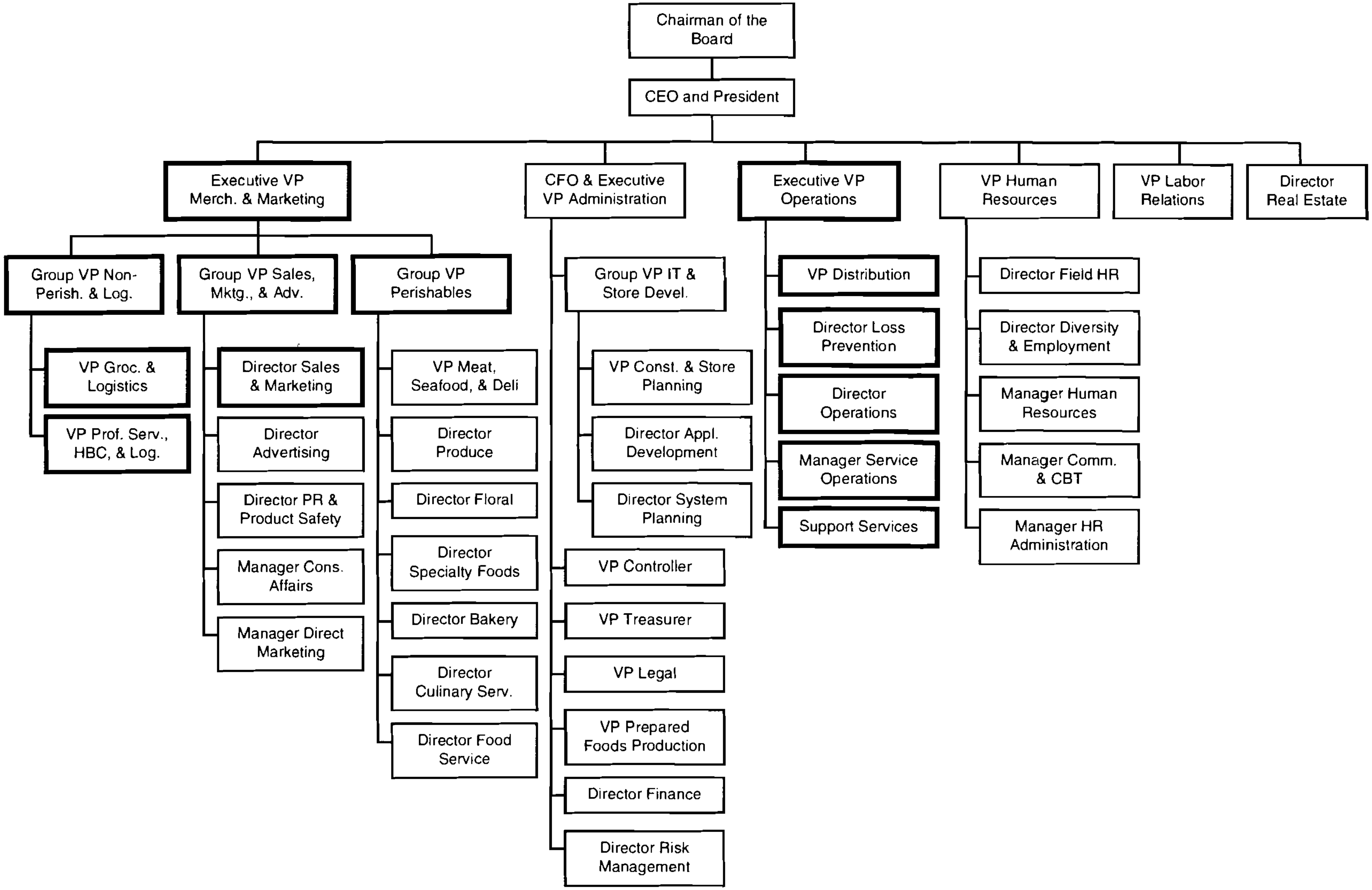
2) Two similar mail questionnaires were developed: one with questions relevant for retail distribution personnel, and the other with questions more appropriate for retail merchandising personnel. These surveys were conducted with a nationally representative sample of retailers, again selected from food, drug, and mass merchandising classes of trade. Names of key contacts within each retail organization came principally from Cornell's mailing lists of grocery industry executives, as well as the industry trade directory, *Retailers and Wholesalers, '95* (Fairchild Publications, New York). The objective of this instrument was to develop an understanding of the processes and the individuals internal to each retail company that exert an influence on order fulfillment procedures and performance. These results will amplify and validate the information gathered from step 1 in the personal interviews but from the perspective of the more "representative" companies around the country. The questionnaire employed several incentives: a copy of the subsequent research report detailing the study findings as well as a selection of other Cornell University Management Studies, and, lastly, an opportunity for one participant to win a full scholarship to Cornell's Food Executive Program. The surveys were mailed in the summer of 1996.

Respondent Profile

In total, our research included 54 different retail respondents, from the three principal retail trade channels: mass merchandising, drug and grocery. The size distribution of respondents is quite representative of the retailing industry. Our sample is dominated by large retailers from each trade channel and, although the confidentiality assured the participants prevents our disclosing their company name, many smaller retailers are included as well. Together, these retail companies supply over 28,000 stores, in all 50 states, and represent 1996 industry sales of approximately $320 billion. Thus it is clear that the views and forecasts documented in this report capture the directions, both current and projected, of the majority of U.S. retailing industries for mass merchandise, grocery, and drug related products.

The individuals responding to our survey come in nearly equal parts from the distribution and the merchandising divisions of their companies. Exhibit 1 shows the formal relationship that the merchandising and distribution professionals have within the organizational hierarchy for a typical retail organization. The marketing/merchandising and distribution functions relevant to our study are highlighted in bold on the exhibit. Of the respondents, their average age is 44, 96 percent of them are male, and 79 percent of them have at least a four-year university degree (15 percent of these possessing a graduate degree).

•Exhibit 1. Organizational Chart Depicting Relevant Marketing/Merchandising and Distribution Functionsfor a Typical Retail Company


Chairman of the Board
CEO and President
Executive VP Merch. & Marketing
CFO & Executive VP Administration
Executive VP Operations
VP Human Resources
VP Labor Relations
Director Real Estate
Group VP Non-Perish. & Log.
Group VP Sales, Mktg., & Adv.
Group VP Perishables
VP Groc. & Logistics
VP Prof. Serv., HBC, & Log.
Director Sales & Marketing
Director Advertising
Director PR & Product Safety
Manager Cons. Affairs
Manager Direct Marketing
VP Meat, Seafood, & Deli
Director Produce
Director Floral
Director Specialty Foods
Director Bakery
Director Culinary Serv.
Director Food Service
Group VP IT & Store Devel.
VP Const. & Store Planning
Director Appl. Development
Director System Planning
VP Controller
VP Treasurer
VP Legal
VP Prepared Foods Production
Director Finance
Director Risk Management
VP Distribution
Director Loss Prevention
Director Operations
Manager Service Operations
Support Services
Director Field HR
Director Diversity & Employment
Manager Human Resources
Manager Comm. & CBT
Manager HR Administration

Section

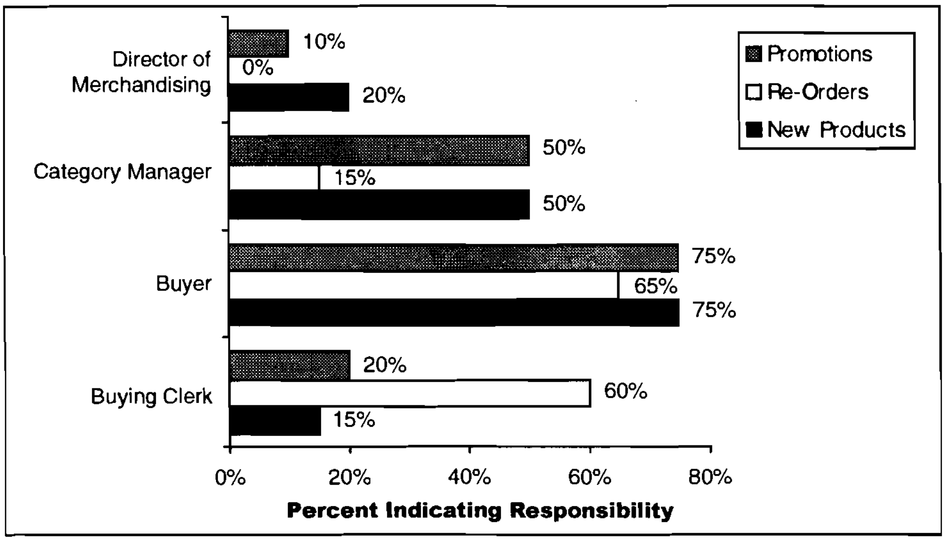
3 Empirical Results, Analyses, & Strategic Implications

The Order Fulfillment Process

Responsibility in Order Fulfillment

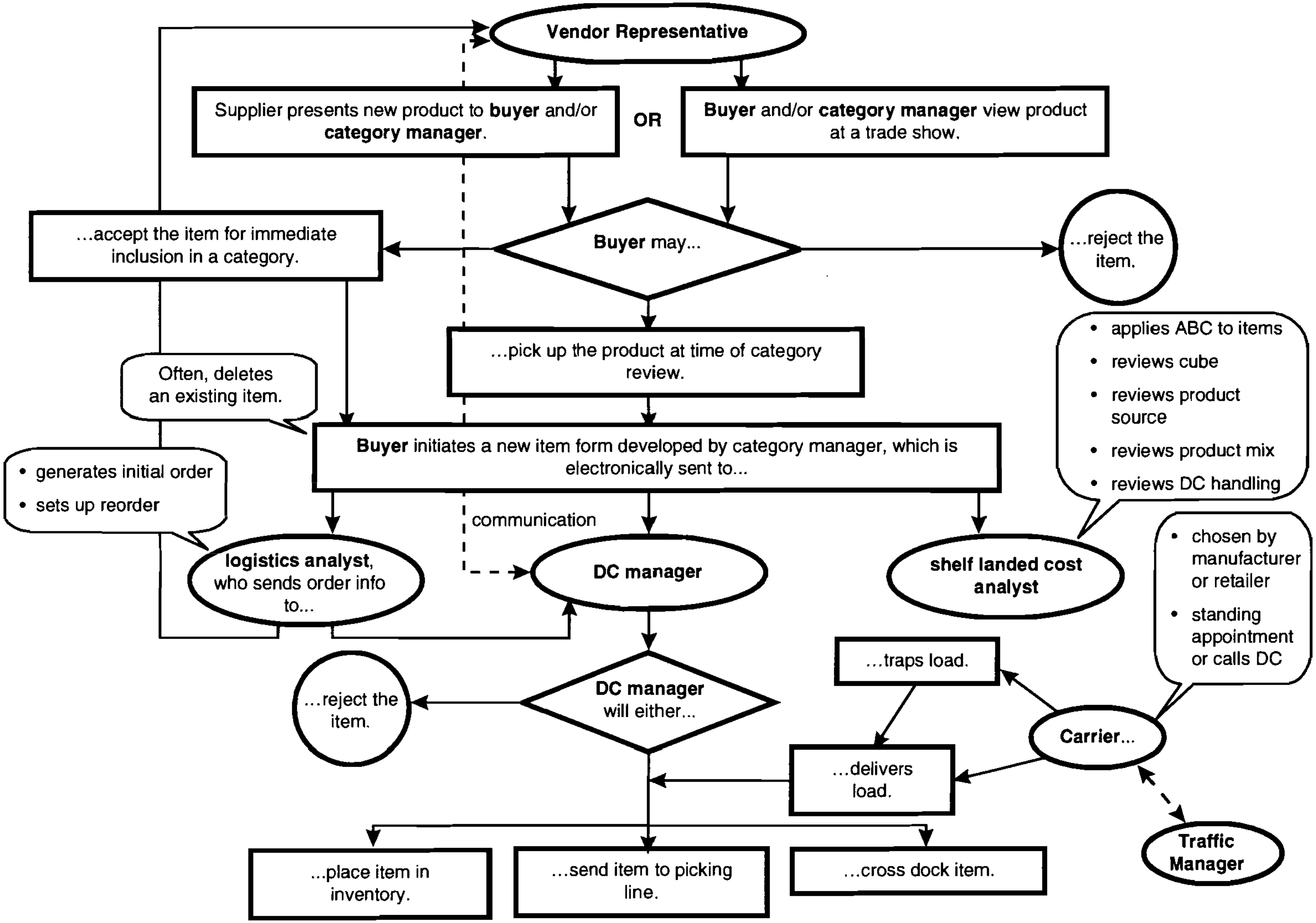
The retail merchandising personnel in our survey indicated that the buyer is a key contact responsible for new product orders, re-orders, and promotional orders (Figure 1). Seventy-five percent of all merchandisers agreed the buyer has responsibility for new product orders. The flow of the typical decisions that impact the new product once presented to the retail buyer/category manager is illustrated in Exhibit 2. Seventy-five percent of all merchandisers also indicated the buyer has primary responsibility for promotional orders, and 65% indicated the buyer's duties include re-orders. This is in stark contrast to other responsible positions, namely the buying clerk, category manager, and director of merchandising. On average, 60% of merchandisers suggested that the buying clerk has responsibility for re-orders. On the other hand, the category manager has primary responsibility for ordering new products and promotional items with 50% of merchandisers indicating each of these responsibilities. Furthermore, merchandisers indicated the director of merchandising has relatively little responsibility for product ordering. In fact, in the case of re-orders, no merchandisers indicated that the director of merchandising is responsible. In regards to supplier interaction, the director of merchandising tends, in most retail organizations, to deal with policy and strategic issues rather than day-to-day issues.

- **Figure 1. Merchandisers' indications of product ordering responsibility by order type.**



On the distribution side of the business, the warehouse manager seems to play the key role in order fulfillment responsibility (Figure 2). Ninety-three percent of the distribution personnel responding to our survey said the warehouse manager has the primary responsibility for the order fulfillment process. The traffic manager and director of distribution also play significant roles with 86% and

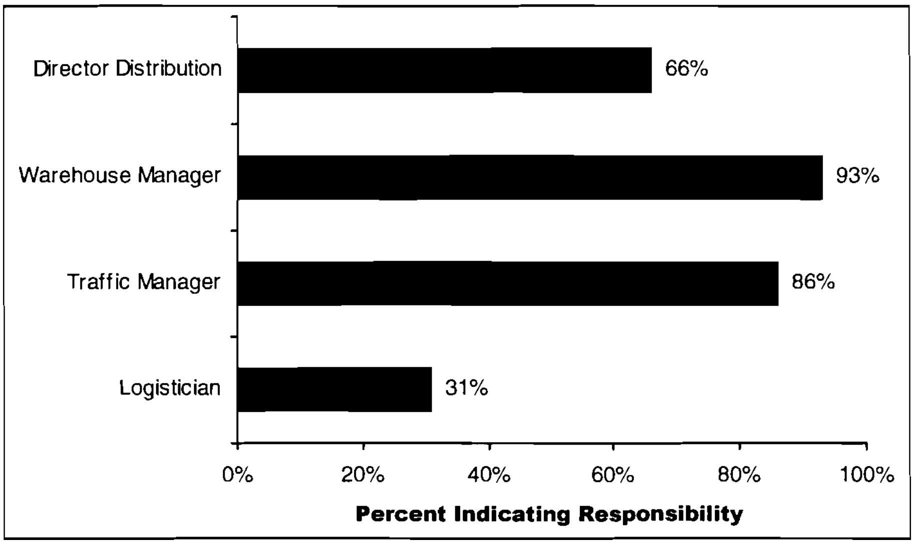
•Exhibit 2. Flow Diagram for New Product Decisions for a Typical Retail Company.


Vendor Representative
Supplier presents new product to buyer and/or category manager.
OR
Buyer and/or category manager view product at a trade show.
Buyer may...
...accept the item for immediate inclusion in a category.
...reject the item.
...pick up the product at time of category review.
Often, deletes an existing item.
Buyer initiates a new item form developed by category manager, which is electronically sent to...
• applies ABC to items
• reviews cube
• reviews product source
• reviews product mix
• reviews DC handling
• generates initial order
• sets up reorder
communication
logistics analyst, who sends order info to...
DC manager
shelf landed cost analyst
• chosen by manufacturer or retailer
• standing appointment or calls DC
...traps load.
DC manager will either...
...reject the item.
Carrier...
...delivers load.
Traffic Manager
...place item in inventory.
...send item to picking line.
...cross dock item.

66% of distributors indicating their responsibility, respectively. The logistician, however, was a distant fourth with only 31% of distributors indicating that this position has responsibility for the order fulfillment process.

Survey respondents indicated the criteria by which these various positions are evaluated in retail organizations. Among merchandisers, service level and inventory turns are the primary criteria in evaluating the buying clerk, buyer, category manager and director merchandising. In addition, the category manager's evaluation hinges on total category performance. Service level is, once again, a primary performance criteria for most distribution positions. Further, evaluative criteria for the logistician, traffic manager, and warehouse manager have a collective sense of timely and efficient distribution of products. Evaluation of the director of distribution seemingly hinges on the overall performance of this process with such criteria suggested as expenses, labor efficiencies, and total coordination. Table 1 provides a detailed compilation of the principal positions in both merchandising and distribution and the criteria employed to evaluate the performance these positions.

- **Figure 2. Distributors' indications of product ordering responsibility.**



Multifunctional Teams

Whether on an informal or a formal basis, many companies have multifunctional teams organized to address order fulfillment issues. However, there is a discrepancy among merchandisers and distributors as to the presence of those teams within their respective companies (Figure 3). Among merchandisers, 75% indicated their company has a multifunctional order fulfillment team. This is in contrast to only 40% of distributors who felt similarly. Responses indicating the make-up of these teams further exemplifies this discrepancy. According to merchandisers who indicated they use a multifunctional team, marketing positions primarily compose the team. Conversely, their distributor counterparts indicate a decidedly more distribution oriented team. In only a minority of retailers do the multifunctional teams genuinely integrate functions across merchandising and distribution divisions.

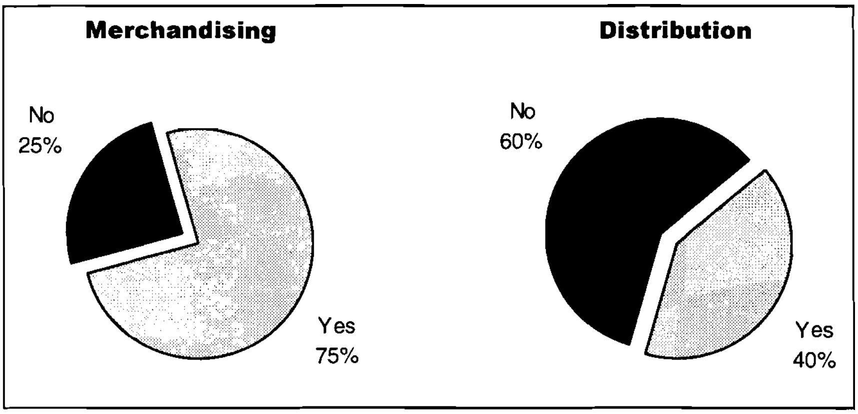
Differences persist when one examines how often these groups meet. Merchandisers reported that multifunctional teams meet an average of 23 times per year, approximately twice per month. Distribution personnel however, reported that multifunctional teams meet an average of 44 times per year.

• Table 1. Selected criteria on which performance is evaluated, by position.

Performance Evaluation Criteria	Merchandising Positions: Buying Clerk	Buyer	Category Mgr.	Director Merch.	Distribution Positions: Logistician	Traffic Mgr.	Whse. Mgr.	Director Distr.
Service level	P[1]	P	P	P	P	S[2]	P	P
Inventory turns	P	P	S	M[3]	M			
Costs	M						S	M
Sales/Revenue		M	S	S		M	M	M
Gross profit		M	M					
Return on assets			M	M				
Weekly promotions		M						
Category performance		M	P					
Customer satisfaction			M					
Category strategy			M					
Lead times					S			
On-time receipts					M	P	S	M
Transportation efficiency					M	S	M	
Labor efficiency						M	M	M
Fleet management						M		
Order quality						M	M	S
Freight claims						M		
Equipment efficiency						M	M	
Backhauls						M		
Appointment times					M			
Distribution scheduling						S	M	
Order processing accuracy							P	
Unloading efficiency							M	
Cost/mile, cost/case					M		M	M
Customer service								M
Cube and weight								M
Total distribution sequence							M	P
Distribution center productivity							P	M

Notes:
1. Principle criterion on which performance is evaluated.
2. Secondary criterion on which performance is evaluated.
3. Minor criterion on which performance is evaluated.

• Figure 3. Percentage of merchandising and distribution executives who report having multifunctional teams.



In the absence of a multifunctional team, among merchandisers, the most frequent communication occurs with other merchandising personnel: buyers, category managers, and warehouse managers, each with an average 156 contact points per year. Distribution personnel however, indicated that most communication occurs with the traffic manager, meeting 260 times per year on average, leading the director of distribution (234 times per year on average) and the logistician and buying clerk (each with 225 times per year on average).

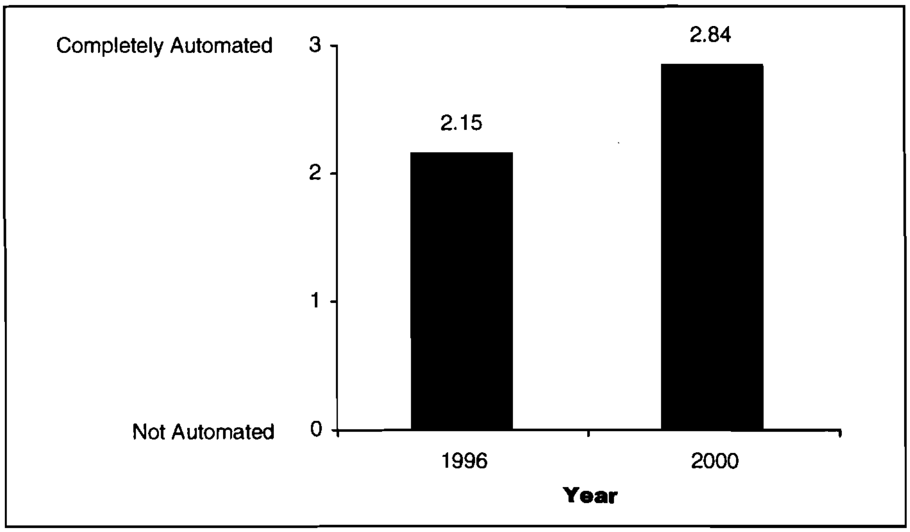
A strongly held belief in the vendor community is that many of the system wide efficiency lapses in grocery marketing and distribution occur internal to the retail organization — specifically as an alleged result of poor communication channels between the retail merchandising department and the retailer's own distribution center. To a surprising extent, retailers agreed with this assessment as historically accurate but most were quick to add that the situation is rapidly changing as illustrated by the growing number of retailers employing multifunctional teams. Today, many retailers estimate, perhaps only 40 percent of all system "disconnects' occur as a result of miscommunication between buyer/merchandiser and the distribution center (DC). The other 60 percent occur, retailers believe, as a function of poor performance by the vendor. Typical examples cited include: a vendor sales rep not fully communicating small changes to a buyer on promotions or special packs; vendors being out-of-stock; incorrect vendor forecasts; and poor communication with carriers.

In an effort to improve internal communication and bridge the gap between merchandising and distribution functions within their organizations, retailers finally reported breaking with the decades-old tradition of keeping their logistics departments decentralized and far-flung. Not only are logistics being consolidated at headquarters but many retailers are actively developing executive career paths so that individuals gain experience and training in both merchandising and distribution tracks.

Characteristics of the Order Fulfillment Process

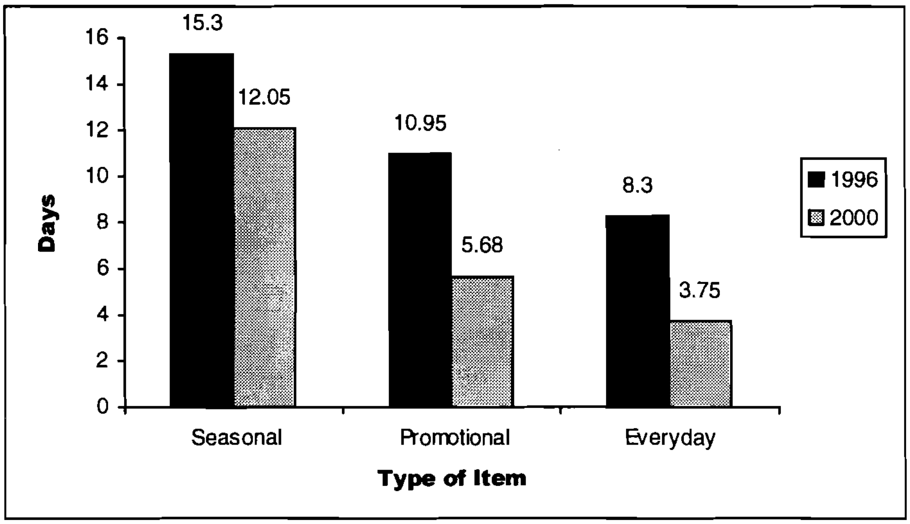
Merchandisers evaluated the degree of automation in the order fulfillment process specifically with respect to reorders. In 1996, on average, they indicated partial automation with a score of 2.15 on a three-point scale (1=not automated, 3=completely automated). However, by the year 2000, they anticipate moving toward complete automation of the "reorder fulfillment" process (Figure 4).

• **Figure 4. Degree of automation of the "reorder fulfillment" process.**



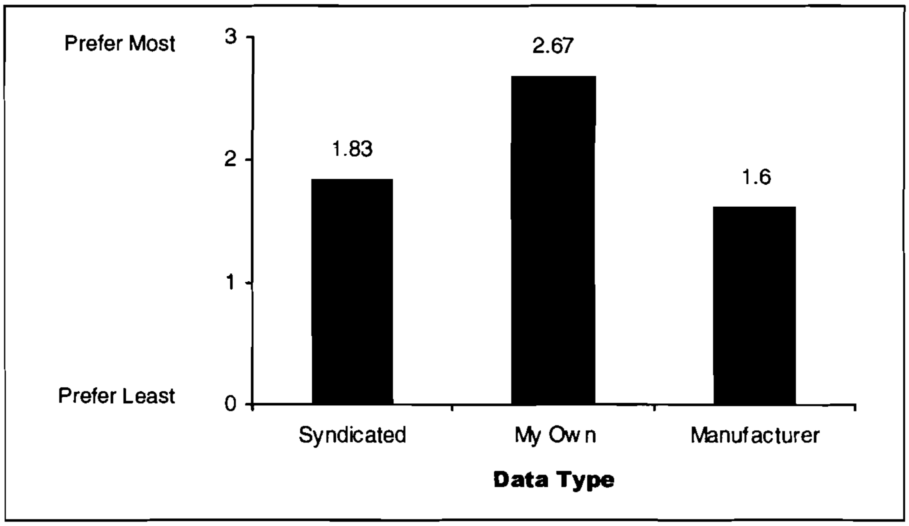
Merchandisers also evaluated order cycle time now and in the future for three types of items, namely, seasonal items, promotional items, and everyday items. Order cycle time is defined here as the number of business days on average that reflects the elapsed time from the retail placement of the order with the supplier until the order is received at the retail DC. Figure 5 shows that in 1996, seasonal items have the largest order cycle time with 15.3 days on average, followed by promotional items (10.95 days) and everyday items (8.3 days). This ranking was unchanged as merchandisers reported their company goals for order cycle time in the year 2000, generally expecting order cycle time to diminish for each item type by 3 to 5 days on average.

- **Figure 5. Order cycle time by type of item; 1996 and year 2000.**



Merchandisers also revealed they rely upon and prefer to use their own product movement data (Figure 6). Although far behind the retailer's own data in ranking, there was a slight preference for syndicated data (e.g., IRI, AC Nielsen) over a manufacturer's data.

- **Figure 6. Preference for product movement data.**



Strategic Implications & Perspectives

- Often, vendor companies are uncertain who in their retail accounts has specific responsibility for order fulfillment and how the responsibilities are divided. Both merchandiser and distributor respondents to our survey shed valuable light on this question. The product buyer has the greatest overall responsibility for order fulfillment with respect to merchandising issues while the warehouse manager has the greatest overall influence in the distribution area. However, the responsibilities differ somewhat depending on the product type. Buying clerks, for example, play relatively minor roles regarding promotions or new product introductions but play a pivotal role when it comes to reordered product. Similarly, although the Director of Merchandising has overall responsibility for all categories, he or she rarely intervenes in the day-to-day operations of buying and ordering.

- The true marketing orientation, and keystone to business success, involves total customer satisfaction. Accepting this notion means assisting your customers in accomplishing their goals, achieving his or her objectives. However, this requires first knowing against what goals, objectives and incentives your customers are measuring themselves. Understanding on what basis your customers are evaluated (by their superior) helps you, the supplier, identify the critical levers important to the customer.

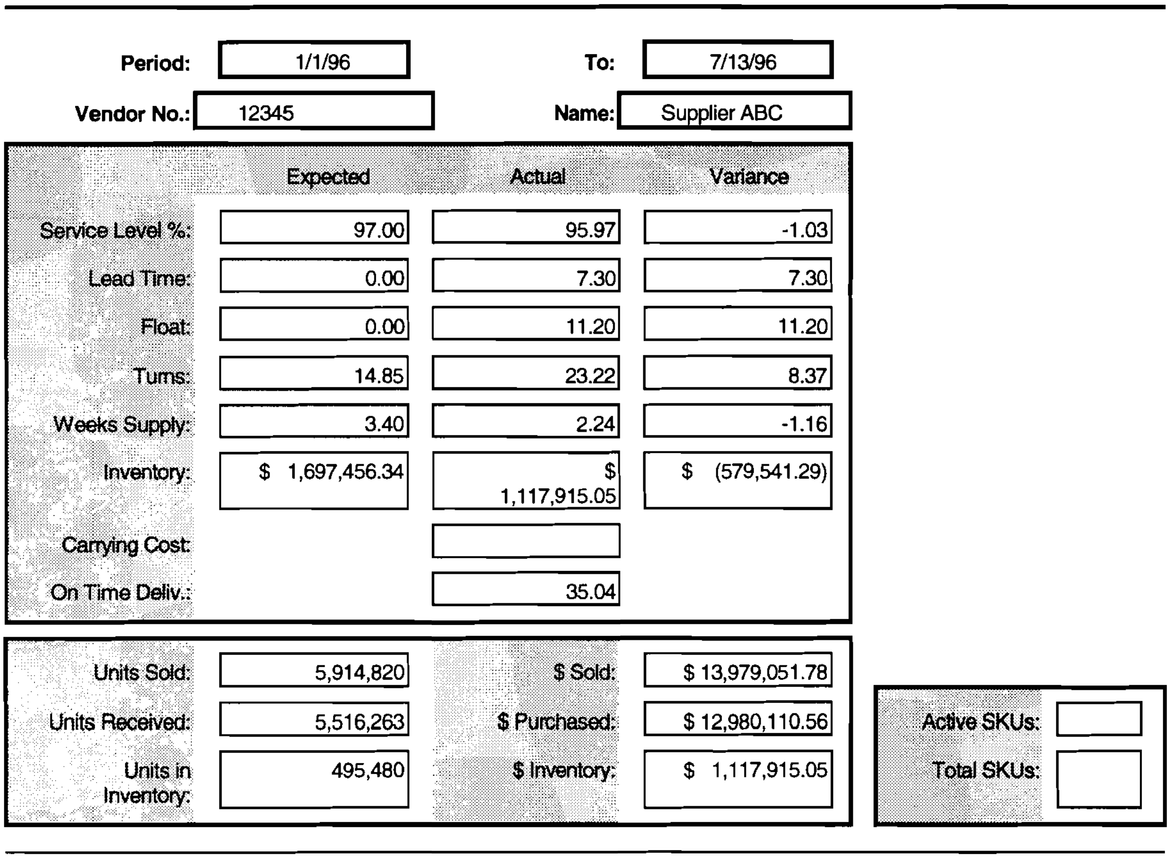
  "Service levels" were reported to be one of the most important primary criteria on which retail merchandisers' performance is evaluated. In fact, this was true for each of the principal merchandising positions. "Inventory turns" was also identified to be a primary measurement criterion for buyers and clerks but not for the merchandising positions. The implications of this result are clear: a supplier who wishes to enhance its position with a particular retailer must above all else excel in ensuring that the retailer's own service levels — both to the distribution center and to the stores — are superior.

  Similarly, suppliers must be cognizant of the incentives for which retailers' distribution personnel are working. Table 1 shows, again, that the primary criteria on which performance is evaluated for most distribution personnel are service levels and inventory turns. In fact, Exhibit 3, taken from the vendor manual of one large multi-region retailer, displays the actual scorecard with which this particular retailer tracks the performance of all its vendors with respect to these two important criteria (see strategic implications in **Overall Vendor Performance Expectations** for a more complete discussion of scorecards). However, many more logistics-related factors also surface. Not surprisingly, for example, the traffic manager is primarily evaluated based on the efficiency of transportation, and to a lesser degree loading/unloading labor. The warehouse manager has a similar interest in labor efficiency but is additionally judged by overall distribution center (DC) efficiency with such indicators as cost/mile, cost/case and equipment efficiencies.

- Our survey shows that the majority of retailers now have regular meetings of multifunctional groups, incorporating both merchandising and distribution personnel. However, our disaggregated results reveal that communication still is not seamless. When asked if multifunctional teams existed, three-quarters of all merchandising personnel agreed but only forty percent of distribution personnel believed this was true. Some distribution personnel shared the belief that the distribution function still does not appear to have the status of the merchandising function and, resultantly, distribution personnel can be more easily overlooked. As such, system disconnects can occur. For instance, retail buyers/category managers typically reported "obtaining optimal packing configurations **subject to** obtaining the lowest price bracket" as their overall guiding objective. This goal can lead to system inefficiencies. Following such a directive from a retailer may lead a vendor to build a pallet or load a truck only with space efficiency in mind in order to qualify a buyer for "maximum volume thus minimum price." Yet in so doing, he may inadvertently be sacrificing time efficiency for space efficiency. This is one illustration of how actions taken by merchandisers without full knowledge of how such actions may impact the distribution part of his business may result in a breakdown in overall system wide efficiency.

  To the extent that this perception continues, it appears to be true at fewer and fewer companies. Indeed, the trend is decidedly the opposite. Many of the major retailers interviewed in this study described a complex schedule of separate weekly and monthly meetings not just between senior executives but working committees of personnel from entire departments devoted to replenishment, traffic, inventory management, logistics, and forecasting. There has clearly been a move away from the era when all logistics functions were lumped together into one monolithic department.

- **Exhibit 3. Actual Vendor Scorecard for Multi-Region Retailer XYZ**



Period:	1/1/96	**To:**	7/13/96
Vendor No.:	12345	**Name:**	Supplier ABC

	Expected	Actual	Variance
Service Level %:	97.00	95.97	-1.03
Lead Time:	0.00	7.30	7.30
Float:	0.00	11.20	11.20
Turns:	14.85	23.22	8.37
Weeks Supply:	3.40	2.24	-1.16
Inventory:	$ 1,697,456.34	$ 1,117,915.05	$ (579,541.29)
Carrying Cost:			
On Time Deliv.:		35.04	

Units Sold:	5,914,820	$ Sold:	$ 13,979,051.78
Units Received:	5,516,263	$ Purchased:	$ 12,980,110.56
Units in Inventory:	495,480	$ Inventory:	$ 1,117,915.05

Active SKUs:	
Total SKUs:	

- As sophisticated information technology has become a requirement for doing business today, it should perhaps be no surprise that the majority of all retailers report that in 1996 their re-ordering process is already partially automated. However, retailers were virtually unanimous in predicting that re-ordering will be nearly completely automated by the year 2000. Of course, suppliers will need to possess similar technological readiness by the year 2000 if they expect to continue a business relationship.

The time that retailers allow suppliers to fill an order is dependent on order type. Lead times or order cycle times are expected to be longer for seasonal and special promotional items than for everyday items, both now and in the future. But suppliers should take note: retailers expect to cut the average lead time for everyday items by greater than one-half (from 8.3 days to 3.75 days) between 1996 and the year 2000. Although a few vendors are already at this standard, in general, meeting this retailer expectation will require enormous additional operational streamlining and coordination over the next few years from the majority of product suppliers.

The exigencies of these reduced lead times for suppliers has its bright side, however. Retailers point out that the magnitude of the expected lead time reductions cannot be accomplished alone. Improved partnerships with suppliers are essential. So while the burden of reacting to shortened lead times and the resulting lower levels of safety stock at retailers' DCs will be borne largely by vendors, these same vendors will now play a more critical role with each retail account. Each retailer will be thrust into a position of relying more on the performance level of each of the (remaining few) vendors.

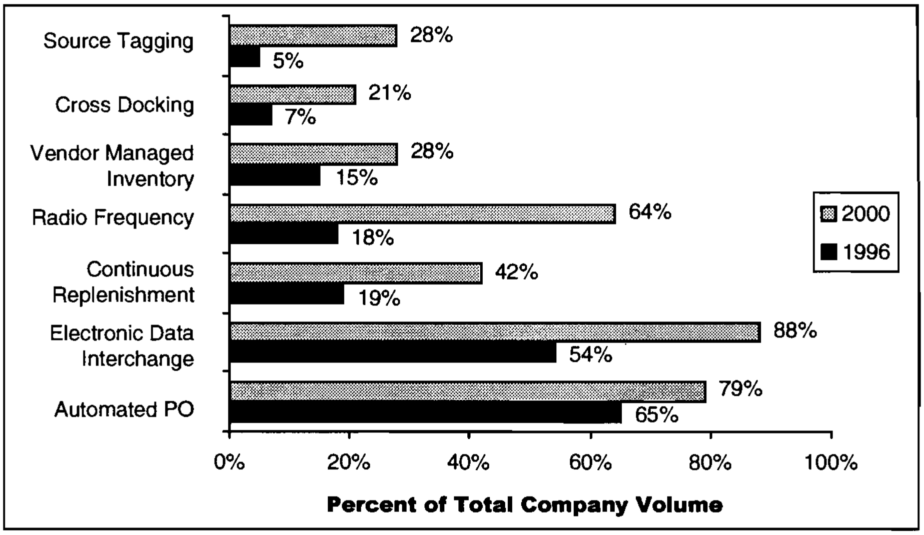
Information Systems & Order Fulfillment

Current & Expected Use of Technology

Merchandisers and distributors described the extent of technology use in their organizations as a percentage of total company volume. While a few forms of technology seemed to have extensive use, all forms project a healthy growth by the year 2000 (Figure 7). Automated purchase orders were the most pervasive form of technology with 65% of total company volume transacted this way in 1996, expected to grow to 79% of total company volume by the year 2000.

Another significant use of technology was electronic data interchange (EDI) with a reported 54% of total company volume transacted this way, expected to grow to 88% by the year 2000. Although radio frequency technology showed an average use of 18% of total company volume, its projected use by the year 2000 was 64%, indicating a growth of over 250%. Results are similar for continuous replenishment (CRP) with 19% use in 1996 projected to 42% use in the year 2000. Vendor managed inventory (VMI) showed 15% use in 1996 projected to approximately double (28%) in use by the year 2000. Reportedly, 7% of total company volume used cross docking in 1996, expected to rise to 21% in the year 2000. Finally, although only 5% of total company volume used source tagging in 1996, it is expected to rise to 28% in the year 2000.

- **Figure 7. Use of technology as a percentage of total company volume; 1996 and year 2000.**

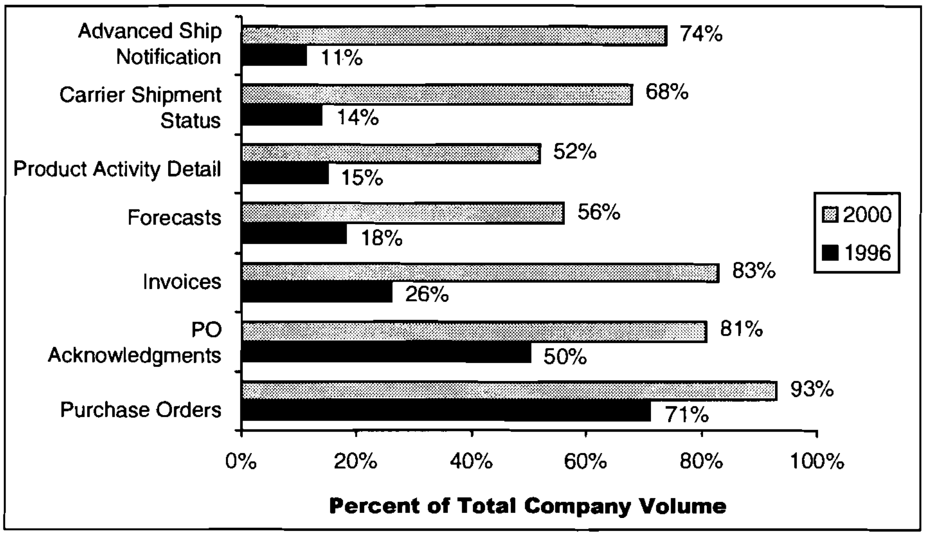


A more in depth analysis of the projections surrounding these various uses of technology could be instructional. To this end, several of the specific technologies ranked above were separated into their component parts. EDI, for example, is explored first. Merchandiser indications of EDI usage as a percentage of total company volume (Figure 8) are characterized by an overwhelming expectation of growth. We find that purchase orders are a primary use of EDI technology; 71% of total company volume utilized EDI in purchase ordering in 1996, rising to 93% by the year 2000. Purchase order acknowledgment was another significant activity for use of this initiative. Purchase order acknowledgments utilized EDI transmission for 50% of total company volume in 1996, rising to 81% by the year 2000. Invoices utilized EDI transmission for 26% of total company volume in 1996, rising to 83% by the year 2000. Forecasts utilized EDI transmission for 18% of total company volume in 1996, rising to 56% by the year 2000. Product activity detail utilized EDI for only 15% of total company volume in 1996, but is expected to rise to 52% by the year 2000. Carrier shipment status utilized EDI for 14% of total company volume in 1996 rising to 68% by the year 2000. Finally, advanced ship notification utilized EDI transmission for only 11% of total company volume in 1996, but will rise to an astounding 74% in the year 2000.

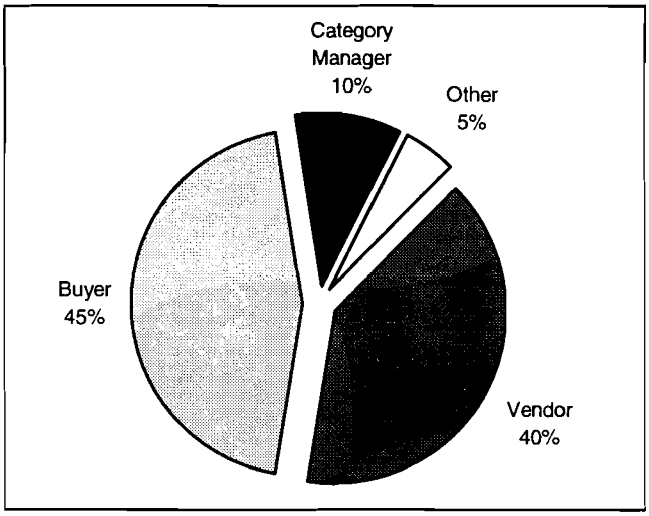
Forecasting product demand is one dimension of a company's CRP environment often split between vendors, category managers, and buyers. On average, merchandisers indicated 45% of the responsibility for product demand forecasting lies with the buyer, 40% with the vendor, and 10% with the category manager (Figure 9).

Electronic Article Surveillance (EAS), often referred to as source tagging, is an issue of growing concern to many retail sectors. In 1996, 41% of surveyed merchandisers indicated they require source tagging (Figure 10). However, source tags are only applied to selected items so that the actual dollar volume, as shown in Figures 9 and 10, is still quite small. By the year 2000, expectations of use rise to 50%. Of those requiring, or expecting to require source tagging, 78% indicate the dollar value of an item is the determining factor of which items receive source tags. On average, the minimum dollar amount needed was $6.83. Furthermore, those requiring or expecting to require source tagging indicate a range of payment arrangements (Figure 11). When asked to indicate who currently (1996) pays for source tagging, 45% indicated the retailer pays, 33% indicated the retailer shares the cost with the supplier, and 22% indicated the supplier pays. Merchandisers involved in source tagging also indicated who is responsible for applying the source tag (Figure 12). In 1996, 45% indicated retailers, 33% indicated suppliers, and 22% indicated both are expected to apply the tag. However, merchandisers apparently expect a significant change in tagging responsibility to occur by the year 2000, as 87% of them indicated the supplier would be responsible for that activity in the future. In 1996, 56% of respondents involved in source tagging use the Checkpoint system and 33% use Sensormatic. These figures change only slightly for expectations of the year 2000 with Checkpoint use up to 57% and Sensormatic up to 43%.

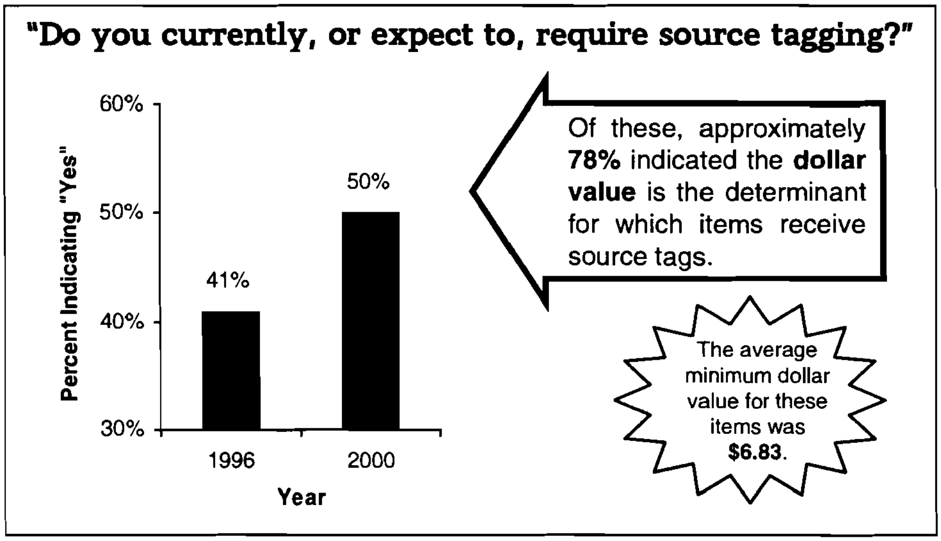
• Figure 8. Utilization of EDI transmission as a percentage of total company volume; 1996 and year 2000.



• **Figure 9. Product demand forecasting responsibility.**



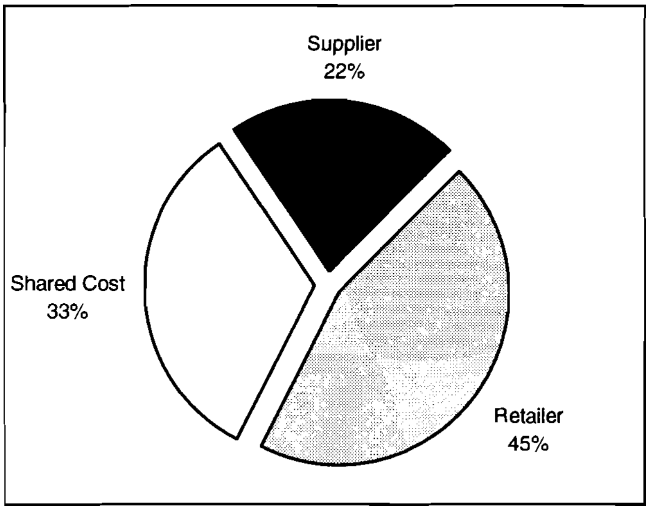
• **Figure 10. Use of source tagging.**



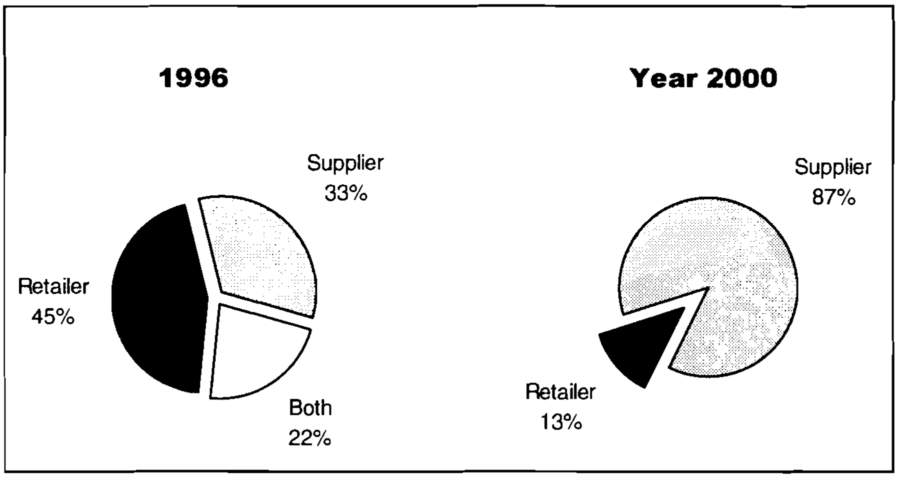
Of these, approximately **78%** indicated the **dollar value** is the determinant for which items receive source tags.

The average minimum dollar value for these items was **$6.83**.

• **Figure 11. Who pays for source tagging?**



• **Figure 12. Retailers' views on who will apply source tags.**



Strategic Implications & Perspectives

- Although historically, the retailing industry has lagged behind most other industries in its use of technology, that condition can no longer said to be true in the latter part of the 1990s. All of the retailers in this study reported already using various new and, many times, innovative technologies especially in their distribution activities. But what's more is the growth they expect to generate in only the next three years. Of the seven major procurement and distribution technologies in Figure 9, every one is expected to grow in use by the year 2000, in some cases by over 300 and 400 percent.

  A number of specific technologies were isolated for special elaboration with retailers. For example, retailers reported that 88% of their total company volume would be transacted by means of electronic data interchange (EDI) in their companies by the year 2000. After in-depth probing, we learned that retailers forecast that over half of all volume will be transacted by means of at least seven major EDI technologies by the year 2000. In order for this to actually happen, several of the currently employed technologies will have to grow three and four-fold between now and the year 2000: cross docking, advanced shipping notice, carrier shipment status, product activity detail, and electronic invoicing.

Other technologies, while projected to grow, apparently do not have the growth potential expected by retailers, as above. Vendor managed inventory (VMI), for one, although expected to approximately double by the year 2000, apparently is not expected to experience the growth rates of, say, electronic invoicing. The reasons can be explained by differing retailer beliefs regarding the proper role of the vendor. Certain retailers view the process of suppliers taking responsibility for managing inventory as the natural evolution of shifting functions and their attendant costs backward in the supply chain toward manufacturers.

Others see such a shift as risky: what evidence, they ask, leads to the expectation that suppliers can manage the inventory any better, or even as well, as the retailer? Moreover, how can suppliers manage inventory when they will never be privy to all the retailer-controlled information such as the cost of capital, what other competing products retailers may be planning to put on promotion, what new stores might be opening, and what other items the retailer may discontinue? Yet these latter possibilities will certainly alter the demand for other products in the category over which the manufacturer has inventory responsibility. To minimize such a possibility yet still take advantage of the potential efficiency gains involved in having supplier managed inventory, a few retailers are going so far as to offer regular training courses in which suppliers are expected to enroll to learn precisely how retailers want their inventory managed and to qualify as "partner-experts" in the retailer's information technologies and operating systems.

Most of the major suppliers have not only clearly heard the warning of this electronic imperative, it is they, in many cases, leading the innovation. In fact, larger suppliers appear to be aware of the advantages that technological leadership confers upon them relative to their small and mid-sized competitors. There is an important structural implication to this retailer demand for greater and greater levels of information technology: small and medium sized suppliers may possess neither the resources nor the expertise to compete. Although virtually all retailers in our interviews maintained that niche suppliers will always have a place in the industry, it appears increasingly likely that suppliers will be bifurcated into two groups: a dominant group of principal, technologically sophisticated companies and a second group of local, fringe suppliers.

One company's statement on vendor performance standards (Appendix B) reveals the dilemma: although in explaining its policies of "vendor accountability for electronic commerce," this retailer pays lip service to allowing specific exceptions for smaller vendors ("whose annual dollar volume does not exceed $100,000"), it states unambiguously later in the same set of guidelines (Appendix B), that these exceptions are temporary only. Simply stated: in the future, suppliers will either have the resources to compete with expensive and sophisticated technologies or they will exit the industry.

Most retailers interviewed acknowledged that they are studying ways to triple their cross-docking activity before the year 2000. Drug store retailers were more cautious, however, since they are generally not able to send pallet size loads, normally associated with cross-docking feasibility, to store level. However, even drug store executives admitted to attempts to increase cross-docking of products for promotional activity. Retailers want product as display-ready (e.g., pre-packed consumer packages and clearly marked secondary shipping cartons) as possible from the vendor. Very few retailers, however, were so committed to reductions in handling (like those associated with cross-docking), that they were encouraging direct store delivery (DSD). Most retailers look unfavorably on the loss in delivery control that they believe inevitably occurs when there is no proper paper trail on record at the distribution center.

- Most retailers recognize that better demand forecasting is fundamental to necessary cost reductions. Furthermore, most understand that alliances with suppliers is the only sensible way to achieve such improvement. Indeed, slightly over half of all retailers surveyed believe that demand forecasting is their responsibility. Nearly as many, however, maintain that it is the vendor who should properly take over that function. Suppliers must be vigilant in identifying whether retail accounts expect to take over demand forecasting responsibility themselves or whether they expect it to be a natural service provided by vendors.

- Electronic article surveillance (EAS), generally referred to as source tagging in industry jargon, is the process whereby electronic anti-theft labels are applied to consumer products. Our respondents forecast that it will be employed by approximately one-half of all retailers by the year 2000, up from about 41 percent today. Retailers currently report using source tagging to address the alarming shrinkage and loss of high value items, particularly in economically disadvantaged store locations. The candidates most often cited for inclusion in source tag programs are batteries, cigarettes, OTC drugs, various GM/HBC products (Preparation H and contraceptives, for example, are some of the highest shrinkage items) and liquor.

  Although source tagging has traditionally been conducted in the retail store environment, according to several leading retailers in this study, its application can be conducted more economically by the manufacturer. Indeed, our survey suggests that whereas only about a third of source tags are applied by suppliers in 1996, retailers expect nearly 90 percent of all tags to be affixed by suppliers by the year 2000.

  Retailers continuing to resist source tagging systems mentioned four leading constraints: 1) their inability to select only one of the two currently available yet incompatible technologies; 2) current level of first-generation technology; 3) current lack of incorporation of the tagging technology into the UPC bar code; and 4) perceptions of current prohibitive costs. Despite these retailer insights, tagging technology appears to be spreading. Until recently, source tagging had been limited primarily to drug and mass merchandise channels, but in the past year several major grocery chains on both coasts have added EAS systems in all of their stores.

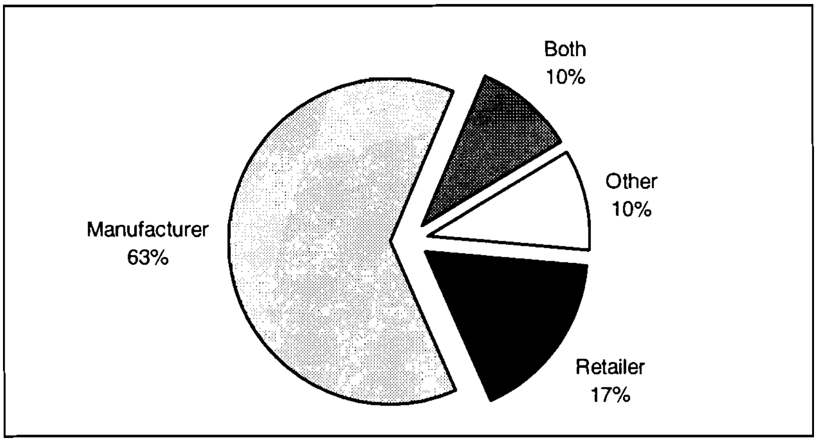
  Although some retailers (and suppliers) voiced an unfavorable opinion of source tagging because they view it strictly as an increase in costs, others have suggested an alternate view. Not only might it reduce overall costs, as losses are more effectively controlled, but some pointed out that source tagging makes the products so much more secure that many more merchandising options become available that were formerly foreclosed. One retailer suggested that cross-merchandising batteries with various electric devices that require batteries will result in a dramatic increase in batteries sold, not stolen. Studies show increases in sales volume of several hundred percent by openly displaying impulse items in high traffic areas.

Transportation, Carrier, & Inventory Practices

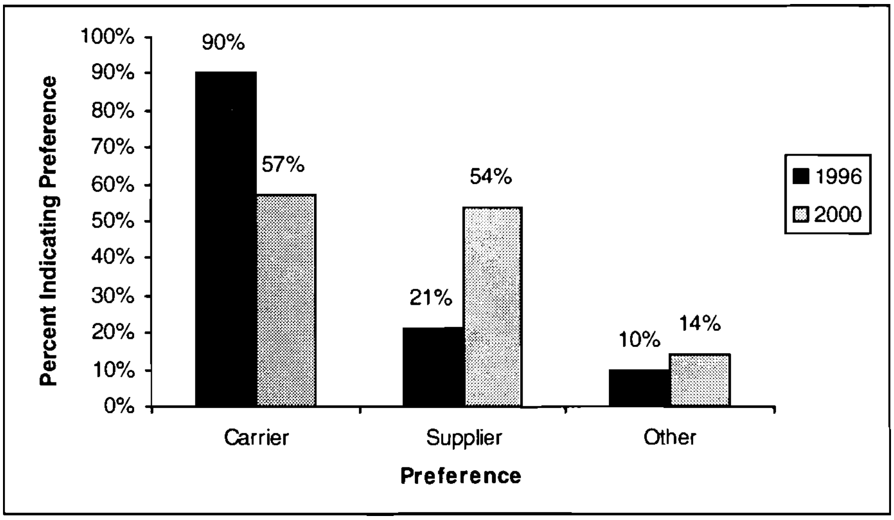
Transportation Arrangements

Our survey shows 63% of retail distributors report that manufacturers pay the freight for incoming orders. Another 17% said the retailer pays for freight, and 10% indicated that the retailer and manufacturer pay together (Figure 13). In regards to transportation arrangements, 63% of distributors indicated they require appointment scheduling with advanced notification. While the majority of distributors indicated they currently prefer the carrier to schedule appointments with the distribution center, this attitude shifts toward suppliers making arrangements in the year 2000 (Figure 14). While the majority of distributors indicated manufacturers select transportation carriers for their pre-paid products, they also indicated they make that selection for products shipped free-on-board (Figure 15).

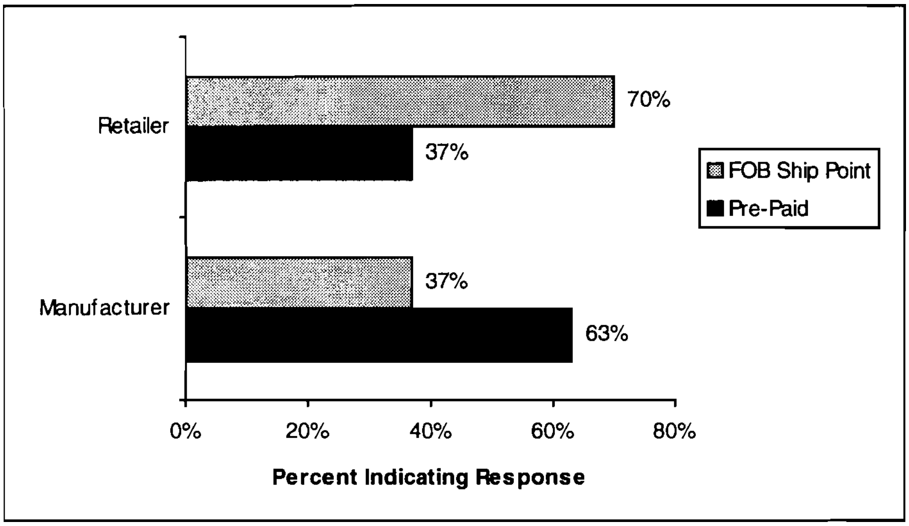
• **Figure 13. Who pays the freight?**



• **Figure 14. Distributors' preferences for who schedules appointments.**



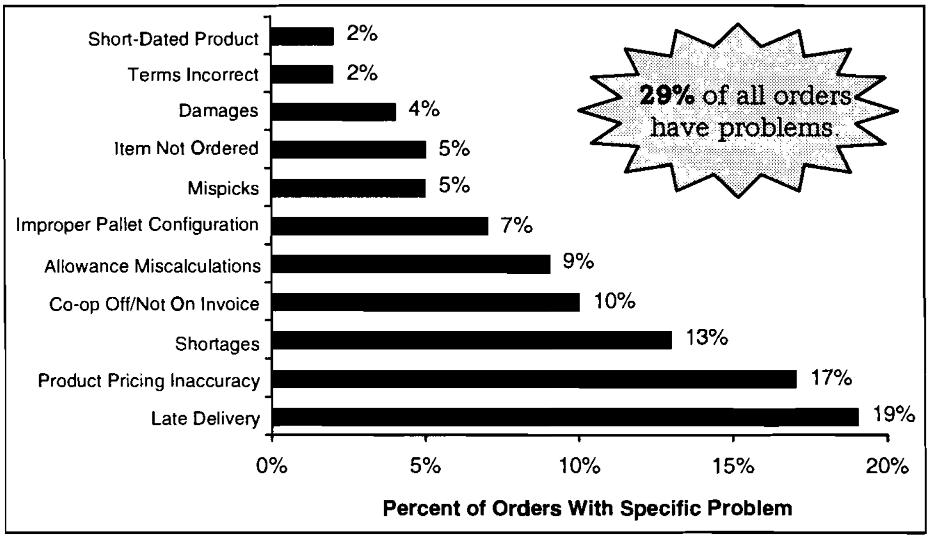
• **Figure 15. Distributor indications of who selects transportation carriers.**



Invoice Problems

Of course, the order fulfillment process is not without its problems. On average, retail merchandisers indicated 29% of all invoices have a "problem" and a slightly higher 32% of HBC invoices have a "problem." The three most common problems with HBC orders are 1) late deliveries, 2) product pricing inaccuracy, and 3) shortages, with 19%, 17%, and 13% of orders affected, respectively (Figure 16). Moreover, distributors indicated on average, 24% of all deliveries and 28% of HBC deliveries are not on time. The reasons for late deliveries revealed a dichotomous response between food retailers and drug stores in the sample. On average, food retailers indicated 37% of late deliveries are due to the carrier not arriving on time, and 29% of late deliveries due to the vendor not shipping on time. Meanwhile, drug store companies indicated an average 56% of late deliveries are due to the vendor not shipping on time and another 10% are due to the vendor not shipping the order at all (Figure 17). Retailers indicated a mean acceptable margin of error on delivery time of 52 minutes. However, only 8% of distributors indicated they levy a non-compliance fee for late deliveries.

• **Figure 16. Percentage of HBC orders delivered with specific problems as indicated by merchandisers.**



Currently, 65% of merchandisers indicate they pay supplier invoices when goods are delivered. However, a dramatic shift is predicted in the year 2000; they expect to pay invoices when goods are sold, as indicated by 75% of merchandisers (Figure 18). Perhaps one of the most dramatic shifts predicted by retailers in this study relates to invoice payments terms. Two changes are relevant. First, in the food channel, where practices in the grocery section tend to dominate and dictate to other sections, payment terms may be changing. Some vendors have already departed from the historical "2% 10 net 30" terms for a longer payment schedule such as "2% 17 net 30" (that is, the 2 percent discount is good for 17, not just 10, days) in order to be more consistent with dry grocery practices.

A second significant change in payment terms has to do with a practice beginning to develop with a few retailers of paying supplier invoices when the goods are sold from the retail store, contrary to historical payment practices as described above. Although only a few retailers (about 10 percent) have actually implemented this new practice, according to our survey, fully three-quarters of all retailers expect to shift to this payment scheme by the year 2000. While retailers explain that this

- **Figure 17. Causes for late orders as indicated by distributors.**

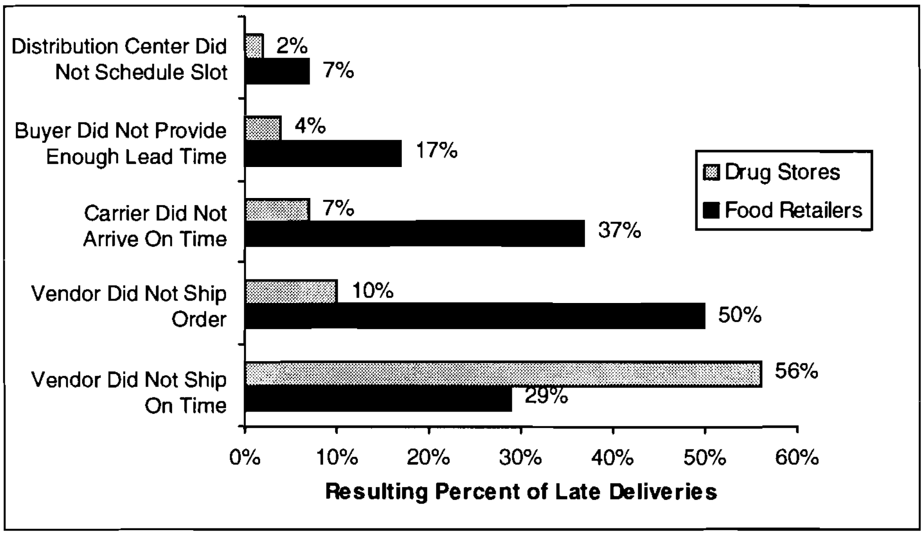
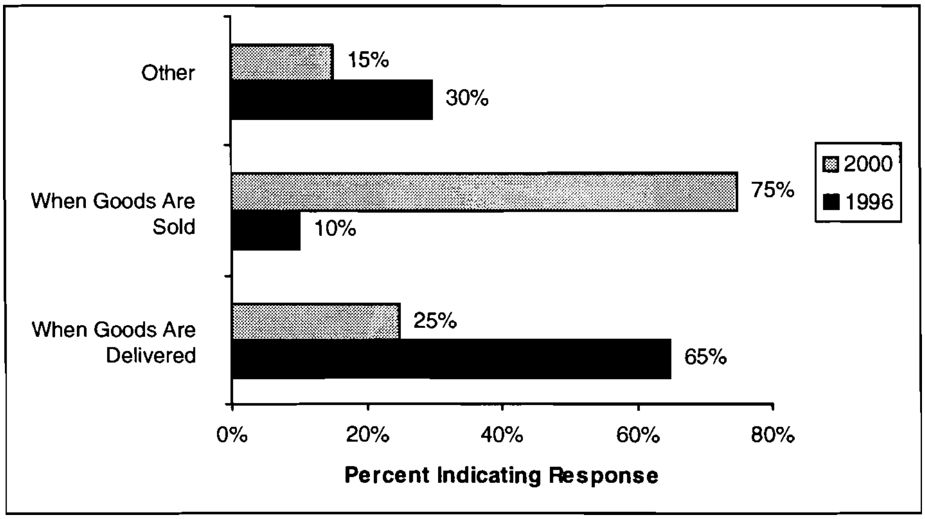


Figure 18. Current and expected policies regarding when to pay supplier invoices.

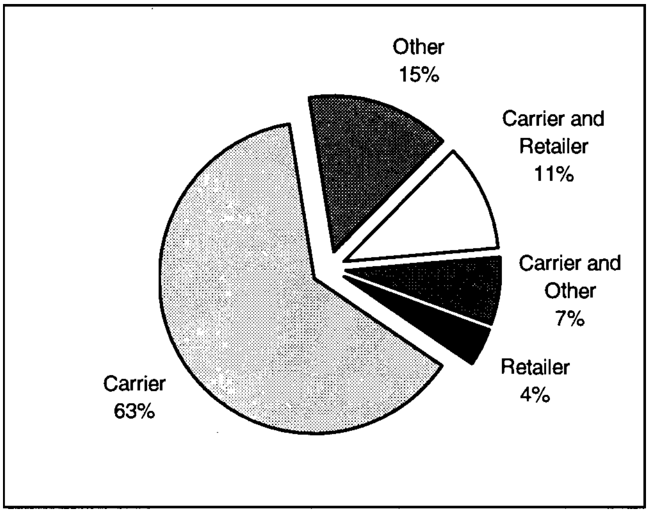


will encourage suppliers to take more complete responsibility for their products until the "sell-thru," instead of simply abdicating responsibility once the product is dropped off at the retail DC, such a departure from historical payment practices will have substantial impact not only on the length of time before payment is initiated to the supplier but potentially on vendor in-store merchandising activity as well. In both cases, this appears to be retailers' exact motivation.

Less than Full Loads

Increasing retailer consolidation has given rise to greater retail interest in eliminating less-than-full truck load shipments (LTLs) from suppliers. In general, retailers prefer full truck load shipments because of the many efficiency opportunities in off-loading, occupying dock space, separating and segregating in the assemble area and ease in scheduling carrier appointments. On average, distributors indicated less than full loads are a slight problem with regard to HBC products. Further, they indicated 23% of HBC arrivals are "trapped", that is, holding a partial load at an intermediate site until a full load is obtained. Furthermore, retailers tend to be of the opinion that most loads are trapped by the transport carrier (Figure 19).

• **Figure 19. Distributor indications of who traps loads.**



Strategic Implications & Perspectives

- Larger, multi-region retailers are generally able to accept straight loads of product from the majority of their suppliers and, in so doing, qualify for the lowest price brackets from suppliers and capture the above efficiency gains at the same time. An important consequence of this trend is that smaller suppliers and suppliers without a broad product line are increasing their use of third party consolidators in order to consolidate loads in a central assembly point before final arrival the retailer's DC. The majority of industry members feel that the introduction of this additional element into the distribution system has actually increased efficiency rather than reduced it.

  There is a cautionary note, however, for some suppliers. Retailers admitted that retail consolidation also means reduction of duplicate non-essential SKUs. One retailer explained: "After analyzing many categories, especially in HBC, we found that our different divisions were carrying many different brands and formulations in the same category without any consumer or regional justification. In such cases, we were able to reduce the SKUs so that we only carry the leading 1 or 2 in a given category and delete the rest." Such practices are increasingly becoming standard at many recently consolidated wholesalers and retailers. Suppliers must consider whether they need to attain number one or two status in their categories or risk being de-listed by efficiency-seeking retail category managers.

- Although currently nine of every ten retailers prefer to schedule their own carrier appointments at their DC, it should be noted that two-thirds of the time the manufacturer still pays for the freight. However, in the next few years it is expected that carrier scheduling will shift to the supplier. As part of the larger trend of shifting functions and costs backward in the distribution system, over half of all retailers say they prefer their supplier to takeover responsibility for carrier scheduling by the year 2000.

- Many retailers have specified their interest in playing a greater role in controlling the transport function, particularly when there are apparent efficiency gains. This appears to be true in at least two principal areas: 1) more retailers are endeavoring to increase the volume of business for which they may have the transportation responsibility whenever backhauling opportunities present themselves; and 2) a growing number of retailers now prefer to specify who the carrier will be. Indeed, this is true for the great majority of retailers when it concerns FOB price shipping. Many retailers provide suppliers with a list of authorized or preferred carriers, sometimes with as few as five or six companies listed.

  Although there is a belief in the supplier community that "preferred carrier" is a thinly veiled attempt to force the supplier to use more expensive, yet ironically often less reliable, carriers, cost was never given as a reason by retailers. Perhaps this is predictable, yet this trend is developing, retailers explain, to take advantage of several efficiency opportunities. First, working more closely with a selected few trusted carriers allows both carriers and retailers more flexibility. Carriers can simply drop off trailers for later unloading when the DC is less busy. Second, by limiting arrivals to selected carriers only, retailers can more easily assign dock times and schedule standing appointments at their DC for their preferred carriers. This in turn allows carriers more flexibility in consolidating loads, reduces LTLs and thus reduces or eliminates trapping. Survey results indicated that nearly one-quarter of all HBC loads are trapped at some intermediate site between manufacturer and retailer DC and approximately two-thirds of retailers believe it is the carrier who is responsible for such trapping as they frequently hold small loads until sufficient quantities have built up to justify a full load delivery to the DC. In some cases, this may result in a delay of several weeks with the consequent disruption of continuous replenishment and drain on system wide efficiency.

- Retailers cited several additional areas commonly associated with efficiency loss. Their own demands for more frequent deliveries from vendors has resulted in considerable increase in the number of LTLs and the number of SKUs on a pallet. As a consequence, despite new technology, the unloading and dock handling tasks have grown more complicated. The "sorting and segregation" function alone can account for one-quarter of all distribution center labor costs. Similarly, many retailers in the grocery channel more accustomed to high volume SKUs, complained that HBC products are often packed in non-optimally large shipping cartons. After all, approximately 90 percent of all picks in the HBC assembly process are "by the each." Instead, many called for half pallets and smaller shippers ("3's and 6's"). Moreover, too much packaging sometimes impedes efficiency as well. Several retailers estimated that "more time is spent cutting off plastic wrap than in actual picking." Retailers reported that efforts taken by suppliers to streamline these activities are likely to result in "preferred supplier" status.

- About one-third of all invoices (only slightly higher with HBC products (32%) than with overall grocery arrivals (29%)) exhibit some type of "problem" according to the retailers in this survey. The largest single category of problems with invoices (with the order in general) identified by retailers was "late deliveries." In fact, in the non-compliance fees that most retailers have developed to cover deviations from their specified order fulfillment practices, an assessment for late deliveries always figures prominently, either with a flat rate or, as found in Exhibit 4, an hourly rate.

  Retail distribution executives cited five leading reasons why merchandise arrives late, perhaps ironically the first two of which are primarily retailers' responsibility: 1) retail failure to give the vendor adequate lead time, in particular for large promotions; 2) a backup of traffic at the DC; 3) trapping of loads, by the carrier or other; 4) vendor is out-of-stock at the factory or late in shipping; and 5) vendor is shipping from multiple sources and loses control of logistics. Virtually every company interviewed, however, reported improvement on late deliveries in recent years, in particular with preferred carrier programs. Nevertheless, each of the eleven problems specified in Figure 16 represent an opportunity for vendor involvement and system-wide performance improvement.

- **Exhibit 4. Standard Vendor Agreement Non-Compliance Fee Schedule**

Base Fee	
$100	Per Incident (Note: The base fee is waived when flat fees are charged)
Hourly Fee	
$35	Per Hour
Flat Fee*	
$1,000	UPC Violations
$100	Packing List Errors/No Packing List
$500	Case Pack Errors
$100	Case Labeling Errors
$500 plus all extra outbound transportation costs	Late Ad Merchandise
$500	ASN incorrect or not provided
$500	Improper application of hangers
$500	Unapproved backorder
$500	Merchandise shipped early/late (shipped before ship on date or shipped after cancel date)
$500	Hazardous materials improperly labeled
	*This may be in addition to an hourly fee.
Fee Collection	<Retailer> will deduct the amount due from any outstanding invoice. If there are monies due to <Retailer> which have not been deducted within ninety (90) days, Vendor shall pay by check. **Note**: Vendor agrees that all amounts set forth in this fee schedule are reasonable liquidated damages and do not constitute a penalty.

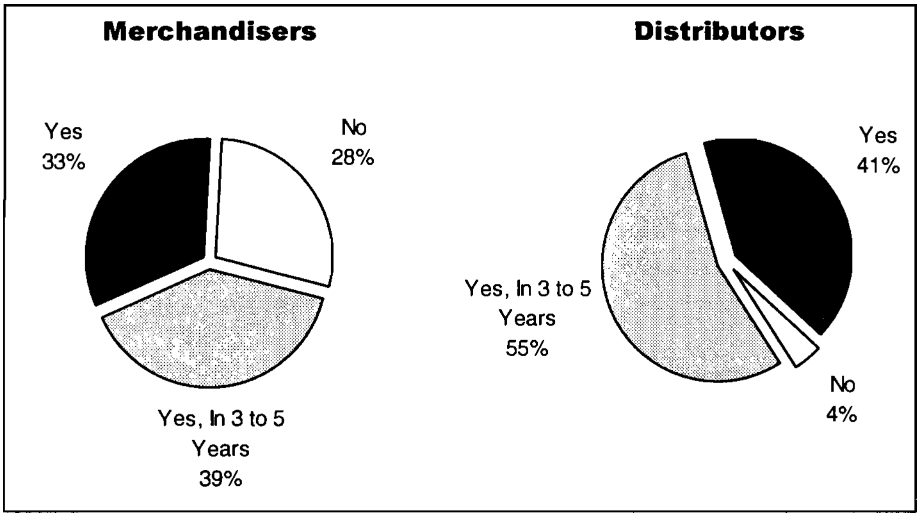
Overall Vendor Performance Expectations

Guidelines & Services

Merchandisers are more or less evenly divided between those who do and those who do not have formal vendor policy performance guidelines. One-third reported having such guidelines, 28% did not have formal guidelines, and 39% plan to have them in 3 to 5 years. These responses were somewhat different for the distributors' policies. According to distributors, 41% report having formal guidelines, 56% plan to have them in 3 to 5 years, leaving 4% who do not have formal policy guidelines and have no long-term plans for any (Figure 20).

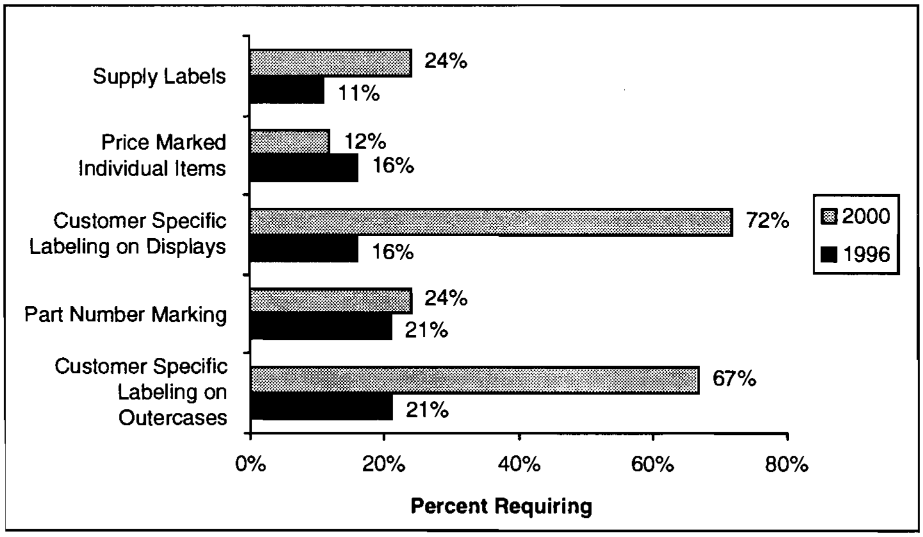
Merchandisers and distributors also have both differing and shifting opinions about specific services they require from their vendors. Currently, 21% of merchandisers indicate they require customer specific labeling on outercases, 21% indicate they require part number marking, 16% indicate they require customer specific labeling on displays, 16% indicate they require price marking on individual items, and 11% indicate they require supply labels. Two major changes seem to be in store by the year 2000, however. In the year 2000, fully 72% of merchandisers indicate they will require customer specific labeling on displays, and 67% indicate they will require customer specific labeling on outercases (Figure 21).

- **Figure 20. Does your company have formal vendor performance guidelines?**

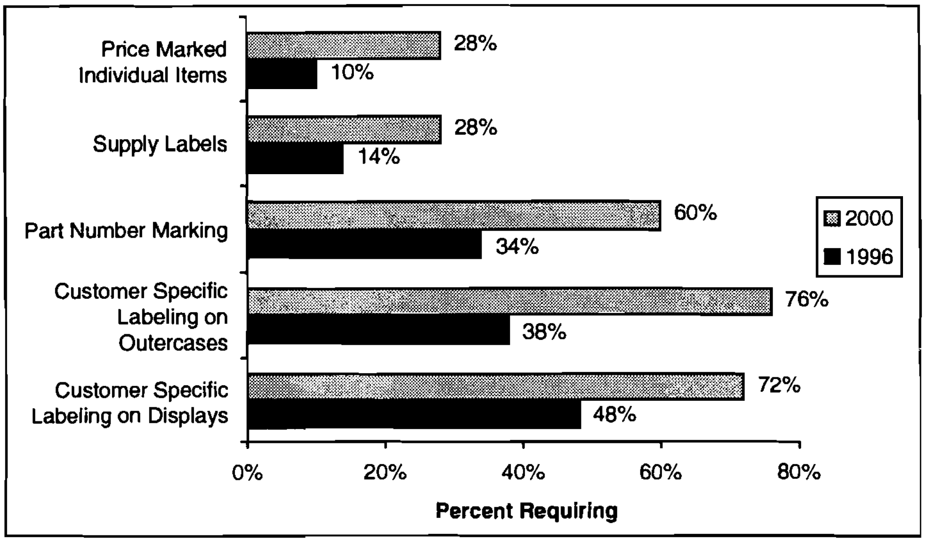


Among distributors, 48% indicate they require customer specific labeling on displays, 38% indicate they require customer specific labeling on outercases, 34% indicate they require part number marking, 14% require supply labels, and 10% require price marking of individual items. Significantly, in the year 2000, 76% will require customer specific labeling of outercases, 72% will require customer specific labeling on displays, and 60% will require part number marking (Figure 22).

- **Figure 21. Merchandiser requirements for specific vendor services.**



- **Figure 22. Distributor requirements for specific vendor services.**



Strategic Implications & Perspectives

- The vast majority of wholesalers and retailers either already have or soon will have formal vendor performance policies that dictate logistical terms, in some cases, in considerable detail. Results from this research demonstrate unequivocally how retailers plan to increase their requirements of vendors with respect to a wide range of distribution and merchandising activities in the near future. The percentage of merchandisers currently requiring "customer specific labeling on displays" is only about 16 percent but will grow to three-quarters by the year 2000. Likewise, the requirements for "customer specific labeling on outercases" will grow by approximately the same proportion between 1996 and the year 2000. Other more stringent retail requirements will place new challenges on vendors: more individual price marking, greater number of labels needed to be forthcoming from vendors, and more part number marking.

Several retailers have already developed "Vendor Information Manuals" providing explicit technical specifications for distribution performance, that run over 100 pages. Exhibit 5 is the list of responsibilities of all vendors provided by one of the retailers in our study. An examination of this exhibit shows how potentially invasive of a manufacturer's operations and strategy such retail "rules for doing business" can be. What's more, failure to meet any and all of these standards results in a penalty fee at the least or even loss of business entirely. The vast majority of retailers in our report have formal published lists of so-called non-compliance fees because they feel that such penalties will quickly convey the message that they, the retailers, are very committed to their stated goals. A few retailers, however, did voice the opinion that over-reliance on such fees may be misplaced. They believe that focusing on the penalty, or even attempting to make penalty fees amount to its own profit center misses the point of working collaboratively with suppliers to improve overall system efficiency and performance.

Another retailer publishes two lists of the criteria on which vendors will be evaluated, one for distribution criteria (see Exhibit 6) and another for merchandising/marketing criteria (see Exhibit 7). Although this retailer identifies ten separate distribution criteria, most retailers agreed that the top two goals are achieving "the highest service levels and the lowest inventory possible." Yet many retailers in the interview process explained a certain frustration with their perception that vendors hear this message but overemphasize the later over the former. This is because reduction in inventory is easy for vendors to demonstrate and quantify in economic terms, but service levels are not so easily validated. To measure the impacts of out-of-stocks, for example, requires estimating the potential retail sales lost due to the out-of-stock situation which is an inexact science to say the least.

- As the vast majority of retail companies move towards becoming more rigorous and comprehensive in their evaluation of their suppliers, records and scorecards on each vendor are quickly becoming the order of the day. Currently, many of these scorecards are preliminary, often somewhat informal, even a little crude. Many retailers admitted that at the present they only monitor the performance of their leading vendors, perhaps the top twenty or so who account for the vast majority of all sales: most retailers subscribe to the "80-20" rule that roughly 20% of their vendors account for 80% of their business.

• Exhibit 5. Vendor Responsibilities as Given by a Major Retail Company

- Provide current financial statements
- Notification of orders which are >20% of annual sales
- EDI (PO and Invoice) on 100% of orders
- Lowest price guarantee
- Compliance with all PO and carton marking conditions
- Non-compliance penalty, vendor pays 10% of problem

• Exhibit 6. Vendor Distribution Evaluation Criteria as Given by a Major Retail Company

- Service levels
- Margins/profitability
- Fill rate
- Forecast error of +/- 5%
- Zero back orders
- Inventory turns
- Lead time
- EDI acknowledgment
- Invoice match rate of 99%
- Carton marking & shipping label compliance

- **Exhibit 7. Vendor Marketing Evaluation Criteria as Given by a Major Retail Company**

- Vendor reacts to our corporate needs
- Customer service — delivery and lead times
- Promotional program variety
- Overall consumer marketing and advertising support
- Promotional flexibility given our objectives
- Extent of vendor strategy compatibility with our company/industry
- Solves problems in timely and efficient manner
- Extent to which vendor develops and markets new products
- Maintains highest product quality levels
- Reliable and cooperative sales representation

Other retailers are pursuing sophisticated information management systems to track the performance of their vendors in excruciating detail. In Exhibit 8 from one major retailer, for example, performance is reported on a monthly basis and compared both to past performance and to the performance of other vendors for each supplier to the retail organization. This includes over 1,000 different vendors. Exhibit 8 documents performance in six principal categories — purchase order performance, invoicing, DC performance, transportation, store performance, and EDI performance — and then weights the importance of each of these categories to arrive at an overall "consolidated score." This score is then used to rank every vendor serving the particular retailer from first to last.

Benchmark Companies and Partnerships in Order Fulfillment

Creating Customer Value

Both merchandisers and distributors were asked to identify the firms they consider benchmark companies in order fulfillment. Responses overwhelmingly indicate Procter & Gamble is highly respected in this regard. P&G was the top ranked answer among both merchandisers and distributors, whether speaking of all categories or just HBC. Other ranking benchmark companies are exhibited in Figure 23.

• **Exhibit 8. Example of a Vendor Scorecard**

VENDOR: XYZ CORP MONTH: MAY PIPELINE: FE REPLENISHMENT

	PO Performance														Transportation			
	Lead Time		PO Line Fill %		PO Quantity Fill %		# of Receipt/PO		Overage %		Shortage %		Order	Forecast	On Time Delivery %		Receiving Productivity	
	Goal	Actual	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Cycle	Accuracy	Month	YTD	Month	YTD
Goal			99%	99%	99%	99%	1	1	5%		5%			99%				
29	7	9	98.7		94.6		3		0		15		12					
40	7	7	97.2		93.3		2		0		10		7					
50	7	8	97.3		92.6		3		0		14		9					
60	7	6	98.6		90.7		3		0		9		7					
70	7	7	99.2		99.2		2		0		12		15					
Total			97.9		93.5		3		0		13			99%				

	DC Performance								Store Preformance									
	Turns		Outs		Volume		Shrink		On Hand WOS		In Stock Level %		Returns		Damages		Outdates	
	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD	Month	YTD
Goal			99%	99%														
29																		
40																		
50																		
60																		
70																		
Total																		

Invoice		EDI								
Match Rate		Outbound Trans			Inbound Trans			PO Pickup		
			Month	YTD		Month	YTD		10AM	8PM
Goal	98%	Errors	0	0	Errors	0	0	2HR	90%	50%
		Rejects	0	0	Rejects	0	0	4HR	5%	50%
Actual		Partials	0	0	Partials	0	0	6HR	5%	
Qty	82%							8HR		
Price	100%	On Time	90%	97%				10HR		
		Late	5%	3%				12HR		
Total	98%	Not Rcv	0%	0%						

CONSOLIDATED SCORE	
PO Performance	
Invoice	
DC Performance	
Transportation	
Store Performance	
EDI	
TOTAL	
Ranking	

• **Figure 23. Benchmark companies in order fulfillment.**

For All Retail Categories

1	Procter & Gamble
2	General Mills
3	Kimberly-Clark
4	Quaker, Ralston Purina (Tie)

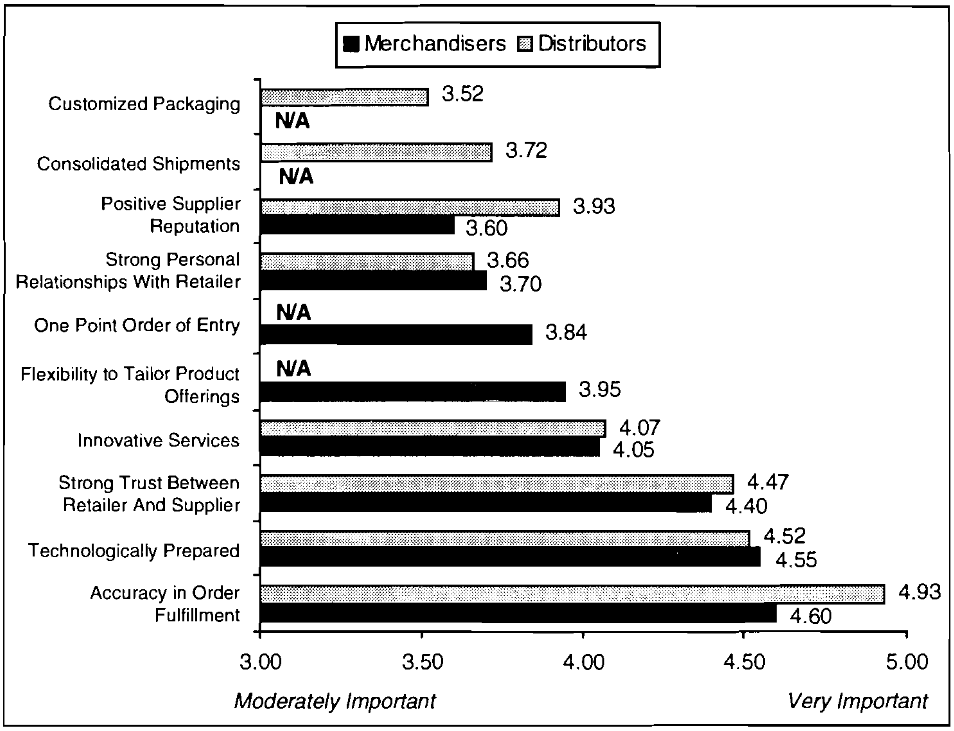
Respondents also rated the importance of given supplier attributes that classify a vendor as a benchmark company. Although merchandiser and distributor responses differ slightly, one should note the top three attributes ranked by each group included 1) accuracy in order fulfillment, 2) technological preparation, and 3) a strong trust between retailer and supplier. Innovative services ranked next in both groups. One difference between merchandiser and distributor responses is that distributors placed a slightly higher importance on a positive reputation of the supplier. Average responses showed that all given attributes are considered at least moderately important to merchandisers and distributors (Figure 24).

Only after certain efficiency gains have been realized does the focus of the partnership shift to include creating customer value. Retailers reported certain “advanced" partnerships that included joint forecasting of consumer demand, meshed planning cycles, rationalized product assortments and joint product development. In these advanced partnerships, retailers not only meet more regularly with their suppliers, they actively seek out opportunities to interact with multiple levels of the supplier organization. Multi-functional visits are arranged to the supplier factory by mixed retailer teams and, conversely, mixed function supplier teams are invited to review retail store practices and DC operations. Several leading retail companies admitted that they simply do not have the time to visit all companies, so currently they limit such visits to their larger supplier partners. Again, "the top 20" was a phrase often invoked to describe which suppliers may be visited — perhaps four to six different suppliers each year.

Strategic Implications and Perspectives

- After discussing all of the above-mentioned merchandising and logistics trends and requirements, retailers were asked which vendors were currently the companies upon whom others should be “benchmarked.” Over 75 separate companies were mentioned at least once by retailers. This impressive number of companies is one indication of the exemplary performance that different companies are capable of delivering, at least to certain customers some of the time. On the other hand, some individual manufacturing companies were listed by many different retailers, with Procter & Gamble leading the list for both overall grocery suppliers and for HBC suppliers in particular.

- **Figure 24. Importance of supplier attribute to merchandisers for determining benchmark status.**



The objective of this study was not to conduct in-depth analyses of the best practices employed by leading suppliers. However, retailers were asked to identify the criteria that led them to identify certain suppliers as benchmark companies. On both the distribution and merchandising sides of the retail business, there was widespread agreement on the four most important factors: accuracy in order fulfillment, technological preparation, strong trust level, and innovative services. Furthermore, for the suppliers that were perceived as the leaders in these criteria, retailers indicated the willingness and, often, eagerness to engage in partnership relationships. When discussing retailers' overall inclination for forming partnerships, one senior executive offered the following perspective: "We always say that 'willingness to listen' to our real needs is essential for our partners but that needs to be combined with a firm's 'ability to respond.' A firm may have heard our message but if it does not have the resources necessary to respond, it does little good to listen well."

It is true that most partnerships begin with a focus on efficiencies: everybody, after all, is in favor or reducing unneeded costs. Most retailers acknowledged that their partnerships with suppliers started by agreements to cut costs, time, inventory and other distribution-related items through enhanced information and product flow. In practice, enhanced efficiency has been the primary goal of such programs as quick response and efficient consumer response (ECR.)

Section
4 Summary & Conclusions

The overarching goal of this study is to improve the understanding of retailers' expectations — both current and in the future — of the requisites of order fulfillment. The study investigated five major themes relative to the order fulfillment process. Below, each is enumerated along with the study findings which illuminate and describe each theme.

The Order Fulfillment Process

- Primary responsibility for order fulfillment within merchandising personnel lies with the buyer while the warehouse manager and traffic manager hold the major responsibilities on the distribution side of the business.
- Retail corporate hierarchies are becoming more complex as new layers are being created, bridging the merchandising and distribution functions. New positions such as "logistician" and "shelf landed cost analyst" are typical. Rather than view these additional positions as expanded bureaucratic layers, vendors will do well to regard them as critical links in the order fulfillment process.
- In an attempt to bridge an often voluminous gap between the merchandising and distributions functions of the retail business, retailers are increasingly forming internal multifunctional teams consisting of individuals from merchandising and distribution who play a key role in some aspect of the order fulfillment process.
- While multifunctional teams are on the increase — presumably improving communication within the retail organization — retailers concede that 40% of order fulfillment problems are a result of miscommunication between their own buyers and distribution center personnel. However, retailers blame vendors for the majority of problems, citing poor vendor performance along a number of specific dimensions.
- Retailers are demanding a decrease in "order cycle time," that is, the time from when the buyer places the order with a vendor until the product is delivered to the retail distribution center. While this certainly places greater pressure on vendors, it also translates into greater retailer reliance on their vendor partners.
- Suppliers need to deliver on the criteria that matter most to retailers. These include: service, inventory levels, productivity, and category management. Any time vendors can work with key retail personnel to improve their individual company performance, vendor-retail partnerships will certainly be strengthened.

Information Systems: Their Role in Order Fulfillment

Extraordinary growth in electronic technology seems destined to dramatically change the traditional order fulfillment process. Specifically:

- Use of source tagging will grow by the year 2000 — half of all respondents reported they expect to use source tagging in just a few years. The majority of retailers expect vendors to apply source tags in the future.
- The use of cross-docking and radio frequency technology will increase three-fold from 1996 levels, resulting in significant operational changes at retail distribution centers.
- Electronic Data Interchange (EDI) is expected to become an industry mandate by 2000. Those dominant, technologically sophisticated firms will prevail as smaller niche players are likely to fall by the wayside.
- Vendor Managed Inventory (VMI) apparently faces several obstacles in retailers' eyes. In particular, they cite problems regarding forecasting demand in the wake of new store openings, deleting/adding new items, and especially planning promotions with competing suppliers. In short, most retailers simply believe that they can still manage their own inventory better than a supplier can.

Transportation, Carrier, and Inventory Practices

- Although, currently, most carriers schedule their own appointments at retail distribution centers, retailers predict that, in a few years, this function will shift to suppliers.
- Retailers believe the majority of late orders are the combined responsibility of the vendor and carrier.
- Retailers place the blame for invoice problems in the laps of vendors and carriers. Retailers' demand for improved EDI and the use of their own preferred carriers appear to be two solutions to this perennially vexing problem.
- A shift in payment of invoices is expected. The majority of retailers said that by 2000 they expect to pay for goods when they are sold rather than when goods are delivered.
- Study findings also indicate trends toward retailer consolidation of LTL loads, increased use of preferred carriers, and increased use of retailer backhaul.

Overall Vendor Performance Expectations

- The majority of retailers expect to have formalized vendor guidelines by 2000. Along with vendor guidelines, vendor scorecards have already become a reality at many retail companies. With scorecards, retailers have the ability to rank/rate vendors on a variety of performance standards. Further, as retailers fully implement their vendor guidelines, penalties for non-compliance are projected to grow.
- Retailers will continue to demand more of vendors, including activities like customer specific labeling on outer cases and displays, and tailored price marking.
- When considering individual vendor performance, specifically for the order fulfillment process, retailers repeatedly upheld Procter & Gamble as a model "best practices" company.
- In determining superior vendor performance in order fulfillment, "accuracy in order fulfillment," "technology prepared," and "strong trust between supplier and retailer" were cited as the most

important supplier attributes. This is one more indication of the importance of technology in the development of future retail-vendor partnerships.

- In general, as retailers ponder the optimal retail-vendor partnerships, they cite shared objectives like cutting costs, reducing order times, reducing inventory, and improved information and product flow.

Several clear trends emerge regarding retailer expectations relative to the order fulfillment process as we approach 2000. Based on information like that contained in this report, vendors should strive to invest in the performance improvement measures which matter most to retailers. Such initiatives will clearly require improved communications both electronically and personally. The findings presented in this report provide strong support for the trend that retailers will continue to shift responsibilities (e.g., custom labeling, pricing, and source tagging) and their related costs toward vendors while shifting payment practices increasingly towards consignment selling. Finally, retailers' new demands for support, advice, and collaboration will drive supplier value from the **product** and **service** orientation of today to the provision of complete business **solutions**.

Appendix

A Trade Association Sponsors

of the Joint Industry Project on Efficient Consumer Response

American Meat Institute
1700 North Moore Street
Arlington, VA 22209
703-841-2400
703-527-0938 (fax)

Food Marketing Institute
800 Connecticut Avenue, NW
Washington, DC 20006
202-452-8444
202-429-4529 (fax)

General Merchandise Distributors Council
1275 Lake Plaza Drive
Colorado Springs, CO 80906
719-576-4260
719-576-2661 (fax)

Grocery Manufacturers of America
1010 Wisconsin Avenue, NW
Suite 900
Washington, DC 20007
202-337-9400
202-337-4508 (fax)

Grocery Products Manufacturers of Canada
855 Don Mills Road
Suite 301
Don Mills, Ontario M3C1V9
416-510-8087
416-510-8043 (fax)

International Dairy Foods Association
1250 H Street, NW
Suite 900
Washington, DC 20005
202-737-4332
202-331-7820 (fax)

National-American Wholesale Grocers' Association
201 Park Washington Court
Falls Church, VA 22046
703-532-9400
703-538-4673 (fax)

National Association of Chain Drug Stores
413 North Lee Street
Alexandria, VA 22314
703-549-3001
703-836-4869 (fax)

National Association of Convenience Stores
1605 King Street
Alexandria, VA 22314-2792
703-684-3600
703-836-4564 (fax)

National Food Brokers Association
2100 Reston Parkway
Suite 400
Reston, VA 22091
703-758-7790
703-758-7787 (fax)

National Grocers Association
1825 Samuel Morse Drive
Reston, VA 22090
703-437-5300
703-437-7768 (fax)

Private Label Manufacturers Association
369 Lexington Avenue
New York, NY 10017
212-972-3131
212-983-1382 (fax)

Uniform Code Council, Inc.
8163 Old Yankee Road
Suite J
Dayton, OH 45458
513-435-3870
513-435-4749 (fax)

Appendix

B Excerpts From a Major Retailer's Statement

on Vendor Performance Standards

VENDOR ACCOUNTABILITY

"<Retailer XYZ> is fully committed to constantly and consistently delivering the highest quality products at the best value to our customers. We are determined to reduce, if not eliminate, inefficiencies and non-value added activities in the supply chain."

"Given these two very focused objectives, those trading partners who have developed a comprehensive program with <Retailer XYZ> on expanding the ever widening use of electronic commerce to conduct efficient replenishment; developing pallet configurations that are conducive to efficient freight and minimal multiple product handling; and restructuring the traditional merchandising strategies have met our objectives. We expect that our organizations will not rest on our laurels, but will continue to innovate on the successes that we have achieved."

"We also recognize that our perishable business — produce, meat, deli, and bakery — operates in a much more dynamic environment. Our perishable business continues to grow and expand to new heights, a trend evident across our industry. As we continue to work with our perishable trading partners to identify areas of efficient opportunities, we will establish mutual expectations. At this time, the Vendor Performance Standards does not include our perishable trading partners."

"Lastly, we acknowledge that a handful of small, local trading partners has been instrumental in providing our organization with unique product offerings at various times of the year. These unique offerings have added to the local flavor of our individual divisions. We recognize that certain requirements called for in the Vendor Performance Standards will require investments, that to the larger trading partners represent routine cost of doing business, yet to the small local trading partners represent a significant cost."

"Our intention is not to inflict excess economic hardships on our small, local trading partners. Therefore, those vendors whose purchase order volume neither exceed 10 purchase orders annually nor whose dollar volume exceed $100,000 will not, at this time, be held accountable for conducting electronic commerce with <Retailer XYZ>."

"However, since the cost of technology decreases over time and with demand, and since further efficiencies in the supply chain will be dependent upon the continual and expanded use of electronic data interchange, if it is determined at a future time that conducting business in a manner other than through electronic data interchange perpetuates inefficiencies in the supply chain, <Retailer XYZ> will require that all business be conducted via electronic commerce."

"Although these trading partners are, at this time, exempt from the technology requirements set forth in the Vendor Performance Standards, we do expect them to observe those requirements that do not require excessive investment. These include requirements such as shipping on good wooden GMA pallets, 15 minute on time delivery, 2 hour trailer unload, accurate cost and deal information, etc."

SHIPMENTS TO ARIVE ON THIRD PARTY 4-WAY ENTRY PALLETS

"Although we are not requiring, at this time, that all products be shipped into our distribution centers on third party leased 4-way entry pallets, we do strongly encourage that our trading partners begin to explore the use of more efficient shipping platforms. Over the course of the next year, we will expect our vendors to migrate towards the use of third party leased 4-way entry pallet."

"All vendors, including those whose annual purchase order volume does not exceed 10 purchase orders and whose annual dollar volume does not exceed $100,000 are expected to ship all products on good GMA wooden pallets. Over the course of the next calendar year, all vendors, excluding those whose annual purchase orders do not exceed 10 purchase orders and whose annual dollar volume do not exceed $100,000, will be expected to migrate toward the use of third party leased 4-way entry pallet as their shipping platform."

Compliance Time Table: 1997

Non-Compliance Fee Schedule: TBD

TWO HOUR UNLOADING

"All product shipments from our trading partners will be unloaded within two hours. With the alignment of our trading partners' pallet configurations and those of our distribution centers, along with palletization of all shipments, unloading a delivery within two hours is certainly achievable."

"All vendors, including those whose annual purchase order volume does not exceed 10 purchase orders and whose annual dollar volume does not exceed $100,000, are expected to satisfy this requirement."

Compliance Time Table: June 30, 1996

Non-Compliance Fee Schedule: $65 for each half hour beyond the designated two hour window (fee based on half hour increments)

15 MINUTE ON-TIME DELIVERY

"All scheduled deliveries from our trading partners are to arrive at the respective <Retailer XYZ> divisional distribution center within 15 minutes of their appointment times."

"In the event of backhaul shipments, our trading partner will be held accountable for delays in the carrier loading process if it is determined that the trading partner is at fault for not having our shipments ready for either our private fleet or third party contracted carriers. Example of these situations include, but are not limited to the following:"

- Unscheduled plant shutdown without notification to the respective <Retailer XYZ> Traffic division(s) affected.
- Unscheduled plant and/or distribution center holiday without notification to the respective <Retailer XYZ> Traffic division(s) affected.
- Delay in product selection and loading readiness.

"We recognize that delays may occur. Given reasonable justification for a late delivery, the respective <Retailer XYZ> Traffic division will exercise appropriate discretion on assessing non-compliance."

"All vendors, including those whose annual purchase order volume does not exceed 10 purchase orders and whose annual dollar volume does not exceed $100,000 are expected to satisfy this requirement."

Compliance Time Table: June 1996

Non-Compliance Fee Schedule: $75 for each half hour carrier is late.

Appendix

C Merchandiser Survey

Participate in a nationwide research study and...

***WIN**, a full tuition scholarship to the world famous Food Executive Program at Cornell University*

Optimal Practices in Order Fulfillment

The objective of this study is to document how retailers measure manufacturers' performance relative to the order fulfillment process specifically for the health and beauty care category.

WHY PARTICIPATE???

☑ You will receive the complete results of this project which will be critical to the success of your company. By acting on the measures important to you, your suppliers will be able to deliver superior performance.

☑ You will be able to benchmark your company against other leading companies in all three classes of trade: food, drug and mass.

☑ You will have an opportunity to win a full tuition scholarship (a $7,000 value!!) to Cornell's renown Food Executive Program as well as receive, free of charge, several recent research reports from the Food Industry Management Program at Cornell University.

conducted by:
Food Industry Management Program
Cornell University
Ithaca, New York

Order Fulfillment includes all those functions associated with placing an order to a supplier: buying, logistics, merchandising, warehousing, distribution and delivery.

SECTION I: THE ORDER FULFILLMENT PROCESS

There are several positions within a retail organization which may influence the order fulfillment process. Typically, these positions are from the buying/merchandising and distribution/warehouse sides of the business. We are interested in learning who in your organization specifically has responsibility for MERCHANDISING/BUYING i.e., placing orders for new products, re-orders and promotional orders.

1a. Please place a check beside each of the positions in your company which have specific responsibility for 1) ordering NEW PRODUCTS, 2) RE-ORDERS AND 2) PROMOTIONAL ORDERING.

	NEW PRODUCTS	RE-ORDER OF PRODUCTS	PROMOTIONAL ORDERS
a. buying clerk	________	________	________
b. buyer	________	________	________
c. category manager	________	________	________
d. director merchandising	________	________	________
e. other________________	________	________	________
f. other________________	________	________	________

1b. For each of the positions listed below which have responsibility for some aspect of the order fulfillment process, what are the two most important criteria by which the performance of these individuals is evaluated in your company?

	PERFORMANCE CRITERIA (E.G. SERVICE LEVEL, INVENTORY TURNS ETC.)	
a. buying clerk	1. ________________________	2. ________________________
b. buyer	1. ________________________	2. ________________________
c. category manager	1. ________________________	2. ________________________
d. director merchandising	1. ________________________	2. ________________________
e. other________________	1. ________________________	2. ________________________
f. other________________	1. ________________________	2. ________________________

1c. To what degree, today and by the year 2000, is the order fulfillment process for RE-ORDERS in your organization automated?

⇒ *please check one for each; TODAY and YEAR 2000*

TODAY		YEAR 2000
______	COMPLETELY	_______
______	PARTIALLY	_______
______	NOT AUTOMATED	_______

Order Cycle Time

1d. On average, what is the order cycle time in your company for the following items:

Note: order cycle time is defined as the number of business days on average which reflects the elapsed time from the time an order is placed until an order is received.

place a check under the number of business days which best describes the order cycle time for seasonal, promotional and everyday items

TYPE OF ITEM	**less than 1 day**	**1-3 days**	**4-6 days**	**7-10 days**	**11-14 days**	**More than 14 days**
a. Seasonal Items	____	___	____	____	____	_____
b. Promotional Items	____	___	____	____	____	_____
c. Everyday Items	____	___	____	____	____	_____

What is your COMPANY GOAL for order cycle time for the year 2000?

TYPE OF ITEM	**less than 1 day**	**1-3 days**	**4-6 days**	**7-10 days**	**11-14 days**	**More than 14 days**
a. Seasonal Items	____	___	____	____	____	_____
b. Promotional Items	____	___	____	____	____	_____
c. Everyday Items	____	___	____	____	____	_____

1e. In your retail organization, is there a multifunctional team (may consist of merchandisers, category managers, distribution, logistics etc.) which meets regularly to address order fulfillment issues?

________ No, *please skip to 1f on next page.*
________ Yes

a. Please list the team members' job titles

MEMBERS' JOB TITLES OF YOUR MULTIFUNCTIONAL ORDER FULFILLMENT TEAM:

1. ____
2. ____
3. ____
4. ____
5. ____
6. ____

b. How frequently does this team meet?

____ *please go to 1g on next pate.*

⇒ ***only answer question 1f if you answered NO to question 1g on page 3***

1f. If you do **NOT** have a multifunctional team, how often do you formally communicate with each of the individuals assigned to the order fulfillment process?

FUNCTIONAL POSITION WITH WHOM I COMMUNICATE	FREQUENCY OF FORMAL COMMUNICATION *(indicate days/wk OR days/month)*	TYPE OF COMMUNICATION *(e.g. phone, meeting, e-mail, etc.)*
MERCHANDISING:		
a. buying clerk		
b. buyer		
c. category manager		
d. director merchandising		
e. other______________		
f. other______________		
DISTRIBUTION:		
a. logistician		
b. traffic manager		
c. warehouse manager		
d. director distribution		
e. other______________		
f. other_______________		

1g. Data on product movement is available from several sources. Indicate 1) your reliance on the following data types and 2) which data source you prefer. **Please rank your "reliance" and "preference" using a scale from 1 to 3 with 1 = most and 3= least.** ***Please indicate your "reliance" and "preference" for each by circling once response on each scale.***

RELIANCE on Data Type			**DATA TYPE**	**PREFERENCE** for Data		
Rely on MOST		Rely on LEAST		MOST Prefer		LEAST Prefer
1	2	3	a. syndicated data	1	2	3
1	2	3	b. my own retail data	1	2	3
1	2	3	c. manufacturer data	1	2	3

1h. If possible, please attach a schematic that illustrates the organizational chart of your management structure.

SECTION II: INFORMATION SYSTEMS

Current and Expected Use of Technology

1. Please estimate the current and expected percent of your **TOTAL COMPANY SALES VOLUME** and **HBC SALES VOLUME** that is transacted via the following initiatives for the years indicated:

	1996		2000	
	Total Company	HBC	Total Company	HBC
a) Electronic Data Interchange (EDI)	______ %	______ %	______ %	______ %
b) Source Tagging (security)	______ %	______ %	______ %	______ %
c) Cross Docking	______ %	______ %	______ %	______ %
d) Continuous Replenishment (CRP)	______ %	______ %	______ %	______ %
e) Vendor Managed Inventory (VMI)	______ %	______ %	______ %	______ %
f) Automated purchase order system	______ %	______ %	______ %	______ %
g) Radio Frequency/bar coding	______ %	______ %	______ %	______ %

Electronic Data Interchange (EDI):

2a. Please estimate the current and expected percent of your **TOTAL COMPANY VOLUME** and **HBC VOLUME** for which EDI transmission is utilized in your company.

	1996		2000	
	Total Company	HBC	Total Company	HBC
a) Purchase orders	______ %	______ %	______ %	______ %
b) P.O. acknowledgements	______ %	______ %	______ %	______ %
c) Product activity detail	______ %	______ %	______ %	______ %
d) Forecasts	______ %	______ %	______ %	______ %
e) Advanced ship notification	______ %	______ %	______ %	______ %
f) Invoices	______ %	______ %	______ %	______ %
g) Carrier shipment status	______ %	______ %	______ %	______ %

2b. Currently, what are the two leading issues associated with EDI transmission for your company and how significant are they? (please indicate two issues and beside each circle the description which best describes the significance of each issue)

ISSUE	VERY SIGNIFICANT	MODERATELY SIGNIFICANT	MODESTLY SIGNIFICANT
a. ____________________ ____________________	1	2	3
b. ____________________ ____________________	1	2	3

Continuous Replenishment (CRP)

3a. In the CRP environment in your company, what percentage of the responsibility for forecasting product demand is held or shared by the following?

_______% vendor
_______% category manager
_______% buyer
_______% other, please explain ____________________
100% ____________________
____
____

3b. Currently, what are the two leading issues associated with CRP for your company and how significant are they? (please indicate two issues and beside each circle the description which best describes the significance of each issue)

ISSUE	VERY SIGNIFICANT	MODERATELY SIGNIFICANT	MODESTLY SIGNIFICANT
a.____________________ ____________________	1	2	3
b. ____________________ ____________________	1	2	3

Vendor Managed Inventory (VMI)

4a. What types of information, with what frequency, and in what form do you **RECEIVE** information from your VMI vendor partners?

TYPE OF INFORMATION	FREQUENCY	FORMAT (*written document, e-mail, phone, personal contact)*
____________________	____________________	____________________
____________________	____________________	____________________
____________________	____________________	____________________
____________________	____________________	____________________

4b. Currently, what are the two leading issues associated with VMI for your company and how significant are they? (please indicate two issues and beside each circle the description which best describes the significance of each issue)

ISSUE	VERY SIGNIFICANT	MODERATELY SIGNIFICANT	MODESTLY SIGNIFICANT
a.____________________	1	2	3
____________________			
b. ____________________	1	2	3
____________________			

4c. What types of information, with what frequency and in what form do you **SUPPLY** information to your VMI vendor partners?

TYPE OF INFORMATION	FREQUENCY	FORMAT (*written , document, e-mail, phone, personal contact)*
____________________	____________________	____________________
____________________	____________________	____________________
____________________	____________________	____________________
____________________	____________________	____________________

4d. Please identify the top 5 suppliers (overall and HBC) who you consider to be the "benchmark" companies in order fulfillment.

SUPPLIERS: OVERALL	HBC SUPPLIERS
1.______________________________	1. ______________________________
2.______________________________	2. ______________________________
3.______________________________	3. ______________________________
4.______________________________	4. ______________________________
5.______________________________	5. ______________________________

4e. How important are the following **supplier attributes** to you in deciding which vendors to consider as "benchmark" companies? *(please circle ONE response per attribute)*

SUPPLIER ATTRIBUTE	NOT IMPORTANT				VERY IMPORTANT
a. positive reputation of supplier	1	2	3	4	5
b. strong trust between retailer and supplier	1	2	3	4	5
c. flexibility of supplier to tailor product offerings specifically to retailer needs	1	2	3	4	5
d. innovative services	1	2	3	4	5
e. technologically prepared (e.g. EDI, CRP, VMI)	1	2	3	4	5
f. strong personal relationships between retailer and supplier	1	2	3	4	5
g. one point of order entry	1	2	3	4	5
h. accuracy in order fulfillment	1	2	3	4	5
i. other, please specify____________	1	2	3	4	5

Source Tagging (security)

5a. Do you currently or expect to require source tagging?

⇒ please complete for both "Currently" and "Year 2000"

CURRENTLY *(check one)*		YEAR 2000 *(check one)*	
YES	**NO**	**YES**	**NO**
______ ↓ *go to 5b*	______ *go to Sec III, 1a.*	______ ↓ *go to 5b*	______ *go to Sec III,1a.*

5b. What criteria do you employ to decide upon which products to place source tagging? (check all that apply)

_______ dollar value of item, please specify what the minimum dollar value is $__________
_______ size of package
_______ other, please specify____

5c. Who currently pays for source tagging? *(please check one)*

________ retailer
________ supplier
________ retailer and supplier shared expense
________ other, please specify________________________________

5d. What source tagging system do you currently and/or expect to use? *(please check all that apply)*

	CURRENTLY	YEAR 2000
a. Sensormatic	________	________
b. Checkpoint	________	________
c. other, please specify ________________	________	________

5e. Who is expected to apply the source tag on the product? *(check all that apply)*

CURRENTLY		YEAR 2000
________	a. supplier	________
________	b. retailer	________
________	c. other, please specify ________________	________

SECTION III: INVOICE & SHIPPING REQUIREMENTS

1a. Often the functions associated with invoicing and shipping are performed incorrectly. On average, what percentage of your 1) HBC and 2) TOTAL invoices have some type of "problem?"

________% of ALL Invoices have a "problem"
________% of HBC Invoices have a "problem"

1b. On an annual basis, 1) what percentage of all HBC orders are delivered with the following problems and 2) what, if any penalty is levied if a supplier is out of compliance?

FUNCTION	PERCENTAGE OF ORDERS	PENALTY
a. product pricing inaccuracy	____________%	______________________
b. co-op off invoice, not on invoice	____________%	______________________
c. other off invoice allowance miscalculations	____________%	______________________
d. shortages	____________%	______________________
e. damages	% __________	
f. short-dated product	____________%	______________________
g. mispicks	____________%	______________________
h. terms incorrect	____________%	______________________
i. late delivery	____________%	______________________
j. item not ordered	____________%	______________________

k. shipment: improper pallet/case configuration __________% ______________

l. other, please specify below: __________% ______________

____

1c. During a typical week, what percentage of HBC orders are "out of stock" both at the distribution center and retail store?

_________% at retail
_________% at distribution center

1d. What is your current and expected policy regarding payment of supplier invoices? *(check all that apply)*

CURRENTLY	POLICY	YEAR 2000
______	a. payment is made when goods are delivered	______
______	b. payment is made when goods are sold	______
______	c. other, please specify ______________	______

1e. Does your company have a set of formal vendor policy performance guidelines? *(please check on response)*

_________ No, not currently
_________ No, but anticipate having them in the next 3-5 years
_________ Yes (***if possible, please attach a copy with your completed survey***)

Customer Specific Services

2a. Do you currently or expect to require your vendors to provide the following services specifically for HBC ?

SERVICE	CURRENTLY		YEAR 2000	
	YES	NO	YES	NO
a. customer specific labeling on outercases	____	____	____	____
b. customer specific labeling on displays	____	____	____	____
c. price mark individual items	____	____	____	____
d. part number marking	____	____	____	____
e. supply labels	____	____	____	____

SECTION IV: COMPANY & PERSONAL BACKGROUND

Please answer as many of the following as possible...

1. What is your present job title?

____

2. How many stores does your company operate?

________________ stores

3. What are the approximate 1995 sales for your company?

$ ________________

4. What is the highest educational degree you have received? *(circle one)*

   a. High school diploma
   b. Two year college degree
   c. Four year college degree
   d. Graduate degree

5. How old were you on your last birthday?

________________ years old

6. Are you: a. Female b. Male

THANKS!!

FOR YOUR HELP IN THIS IMPORTANT STUDY!

PLEASE ENCLOSE THE COMPLETED QUESTIONNAIRE IN THE ENVELOPE PROVIDED AND MAIL IT TO US TODAY.

Upon receipt of your completed questionnaire, you will:

- Become eligible to win a full tuition scholarship to Cornell's world renown Food Executive Program held annually for two weeks in July. Please see the enclosed brochure for additional details regarding the Food Executive Program.
- Receive, free of charge, any of the research studies listed below as well as a copy of the survey results. If you would like us to send you either the survey results or recent Cornell research studies, please provide the following information. *(This page will be separated from the questionnaire to ensure the anonymity of your response.)*

Name: ______________________________

Company Name: _______________________

Address: ____________________________

____

CORNELL FOOD INDUSTRY MANAGEMENT RESEARCH REPORTS

(please check those of interest and we will enclose them with the survey results)

_____ *What's In Store for Home Shopping?* Kristen Park, Debra J. Perosio, Gene A. German and Edward W. McLaughlin, May 1996.

_____ *Dairy Department Procurement Dynamics,* Edward W. McLaughlin and Debra J. Perosio, May 1996.

_____ *Fresh Fruit and Vegetable Procurement Dynamics: The Role of the Supermarket Buyer,* Edward W. McLaughlin and Debra J. Perosio, February 1994.

_____ *Supercenters: The Emerging Force in Food Retailing,* Gene A. German, Gerard F. Hawkes and Debra J. Perosio, October 1993.

If you have any questions regarding the study or this questionnaire, please contact:

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Fax (607) 255-4776
e-mail djp7@ cornell.edu

Appendix

D Distributor Survey

Participate in a nationwide research study and...

***WIN**, a full tuition scholarship to the world famous Food Executive Program at Cornell University*

Optimal Practices in Order Fulfillment

The objective of this study is to document how retailers measure manufacturers' performance relative to the order fulfillment process specifically for the health and beauty care category.

WHY PARTICIPATE???

☑ You will receive the complete results of this project which will be critical to the success of your company. By acting on the measures important to you, your suppliers will be able to deliver superior performance.

☑ You will be able to benchmark your company against other leading companies in all three classes of trade: food, drug and mass.

☑ You will have an opportunity to win a full tuition scholarship (a $7,000 value!!) to Cornell's renown Food Executive Program as well as receive, free of charge, several recent research reports from the Food Industry Management Program at Cornell University.

conducted by:
Food Industry Management Program
Cornell University
Ithaca, New York

SECTION I: THE ORDER FULFILLMENT PROCESS

There are several positions within a retail organization which may influence the order fulfillment process. Typically, these positions are from the buying/merchandising and distribution/warehouse sides of the business. We are interested in learning who in your organization specifically has responsibility for the order fulfillment process on the DISTRIBUTION side of your business.

1a. Please place a check beside each of the positions in the distribution area of your company which have responsibility for the order fulfillment process and indicate their specific responsibilities.

	POSITION	RESPONSIBILITY IN ORDER FULFILLMENT PROCESS
a. logistician	________	______________________________
b. traffic manager	________	______________________________
c. warehouse manager	________	______________________________
d. director distribution	________	______________________________
e. other______________	________	______________________________
f. other______________	________	______________________________

1b. For each of the positions listed below which have responsibility for some aspect of the order fulfillment process in distribution, what are the two most important criteria by which the performance of these individuals is evaluated in your company?

	PERFORMANCE CRITERIA (E.G. SERVICE LEVEL, INVENTORY TURNS ETC.)	
a. logistician	1. ________________	2. ________________
b. traffic manager	1. ________________	2. ________________
c. warehouse manager	1. ________________	2. ________________
d. director distribution	1. ________________	2. ________________
e. other______________	1. ________________	2. ________________
f. other______________	1. ________________	2. ________________

1c. In your retail organization, is there a multifunctional team (may consist of merchandisers, category managers, distribution, logistics etc.) which meets regularly to address order fulfillment issues?

________ No, *please skip to 1d.*
________ Yes

└→ a. *Please list the team members' job titles on the next page*

MEMBERS' JOB TITLES OF YOUR MULTIFUNCTIONAL ORDER FULFILLMENT TEAM:

1. ______________________

2. ______________________

3. ______________________

4. ______________________

5. ______________________

6. ______________________

7. ______________________

8. ______________________

9. ______________________

10. ______________________

↓

b. How frequently does this team meet?

______________________ *please go to 1e*

⇒ ***only answer question 1d. if you answered NO to question 1e on page 2***

1d. If you do **NOT** have a multifunctional team, how often do you formally communicate with each of the inviduals assigned to the order fulfillment process?

FUNCTIONAL POSITION WITH WHOM I COMMUNICATE	FREQUENCY OF FORMAL COMMUNICATION *(indicate days/wk OR days/month)*	TYPE OF COMMUNICATION *(eg. phone, meeting, e-mail etc.)*
MERCHANDISING:		
a. buying clerk	______________	______________
b. buyer	______________	______________
c. category manager	______________	______________
d. director merchandising	______________	______________
e. other__________	______________	______________
f. other__________	______________	______________
DISTRIBUTION:		
a. logistician	______________	______________
b. traffic manager	______________	______________
c. warehouse manager	______________	______________
d. director distribution	______________	______________
e. other__________	______________	______________
f. other__________ _	______________	

1e. If possible, please attach a schematic that illustrates the organizational chart of your management structure.

1f. Please identify the top 5 suppliers (overall and HBC) who you consider to be the "benchmark" companies in order fulfillment.

SUPPLIERS: OVERALL	**HBC SUPPLIERS**
1.____________________	1. ____________________
2.____________________	2. ____________________
3.____________________	3. ____________________
4.____________________	4. ____________________
5.____________________	5. ____________________

1g. How important are the following **supplier attributes** to you in deciding which vendors to consider as "benchmark" companies in order fulfillment? *(please circle ONE response per item)*

SUPPLIER ATTRIBUTE	**NOT IMPORTANT**				**VERY IMPORTANT**
a. positive reputation of supplier	1	2	3	4	5
b. strong trust between retailer and supplier	1	2	3	4	5
c. customized packaging	1	2	3	4	5
d. innovative services	1	2	3	4	5
e. technologically prepared (eg. EDI, CRP, VMI)	1	2	3	4	5
f. strong personal relationships between retailer and supplier	1	2	3	4	5
g. consolidated shipments	1	2	3	4	5
h. accuracy in order fulfillment	1	2	3	4	5
i. other, please specify ____________	1	2	3	4	5

SECTION II: INFORMATION SYSTEMS

Current and Expected Use of Technology

1. Please estimate the current and expected percent of your **TOTAL COMPANY SALES VOLUME** and **HBC SALES VOLUME** that is transacted via the following initiatives for the years indicated:

	1996		2000	
	Total Company	HBC	Total Company	HBC
a) Electronic Data Interchange (EDI)	_______ %	_______ %	_______ %	_______ %
b) Source Tagging (security)	_______ %	_______ %	_______ %	_______ %
c) Cross Docking	_______ %	_______ %	_______ %	_______ %
d) Continuous Replenishment (CRP)	_______ %	_______ %	_______ %	_______ %
e) Vendor Managed Inventory (VMI)	_______ %	_______ %	_______ %	_______ %
f) Automated purchase order system	_______ %	_______ %	_______ %	_______ %
g) Radio Frequency/bar coding	_______ %	_______ %	_______ %	_______ %

SECTION III: WAREHOUSING & TRANSPORTATION

1a. Who typically pays the freight for an incoming order?

______ retailer
______ manufacturer
______ other, please specify______________________________

1b. Which of the following do you require regarding transportation arrangements? (check all that apply)

______ appointment scheduling
______ advanced notification
______ other, please specify____

1c. Who selects transportation carriers for your pre-paid and your F.O.B. products? *(please check all that apply)*

Pre-paid		F.O.B. Ship Point
____________	currently we do	____________
____________	do not currently select the carrier	____________
____________	but plan to in 3 to 5 years	____________
____________	manufacturer	____________
____________	other, please explain	____________

1d. Currently, and in the future, who do you prefer to schedule appointments with the distribution center?

CURRENTLY	PREFERENCE	YEAR 2000
________	a. carrier	________
________	b. supplier	________
________	c. other, please specify ____________________	________

1e. On average, what percentage of all deliveries **AND** HBC deliveries to your distribution center are **NOT** "on time?"

% of Deliveries NOT on time:

________ all deliveries

________ HBC deliveries ONLY

1f. What percentage of the time are late orders the responsibility of each of the following?

________ % - the vendor did not ship on time

________ % - the vendor did not ship the order at all

________ % - personnel in the distribution center did not schedule a slot for the carrier

________ % - the buyer did not provide enough lead time for "on time" delivery

________ % - the carrier did not arrive "on time"

________ % - other, please specify ____

100%

1g. What is the maximum acceptable "margin of error" allowed for either an early or late delivery of an HBC order at your distribution center?

________ minutes

1h. Do you levy a non-compliance fee for "late" deliveries?

________ NO

________ YES

→ Please explain the nature of the penalty ***[please attach a penalty schedule if available]***

____

____

____

1i. In your opinion, how big a problem are "less than full loads" (LTL) with HBC products? *(please circle one)*

NOT A PROBLEM	SLIGHT PROBLEM	MAJOR PROBLEM
1	2	3

If you answered either "2" or "3" to the above question, please briefly explain the exact nature of the problem:

____

____

____

1j. Approximately what percentage of your HBC arrivals are "trapped?" (i.e., hold a partial load until a full load is obtained) _____%

1k. In order to minimize LTLs who "traps" loads? *(please check all that apply)*

________ carrier
________ retailer
________ other, please specify ____________________________________

1l. During a typical week, what percentage of HBC orders are "out of stock" both at the distribution center and retail store?

__________% at retail

__________% at distribution center

1m. Does your company have a set of formal vendor policy performance guidelines?

__________ No, not currently
__________ No, but anticipate have them in the next 3-5 years
__________ Yes (***if possible, please enclose a copy with your completed survey***)

1n. Currently, what are the two leading issues associated with warehousing and transportation for your company and how significant are they? (please indicate two issues and beside each circle the description which best describes the significance of each issue)

ISSUE	VERY SIGNIFICANT	MODERATELY SIGNIFICANT	MODESTLY SIGNIFICANT
a. ________________________ ________________________	1	2	3
b. ________________________ ________________________	1	2	3

Customer Specific Services

2a. Do you currently require or expect to require your vendors to provide the following customer service functions?

FUNCTION	CURRENTLY		YEAR 2000	
	YES	NO	YES	NO
a. customer specific labeling on outercases	____	____	____	____
b. customer specific labeling on displays	____	____	____	____
c. price mark individual items	____	____	____	____
d. part number marking	____	____	____	____
e. supply labels	____	____	____	____

SECTION IV: COMPANY & PERSONAL BACKGROUND

Please answer as many of the following as possible...

1. What is your present job title?

____

2. How many stores does your company operate?

________________ stores

3. What are the approximate 1995 sales for your company?

$ ________________

4. What is the highest educational degree you have received? *(circle one)*
   a. High school diploma
   b. Two year college degree
   c. Four year college degree
   d. Graduate degree

5. How old were you on your last birthday?

________________ years old

6. Are you: a. Female b. Male

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Supermarket Development in China, Gene A. German, Jane Wu, and Ming Li Chia. E.B. 96-20, December 1996.

The Feasibility of a Mid-Hudson Valley Wholesale Fresh Produce Facility: *A Buyer Assessment*, Craig R. Kreider and Edward W. McLaughlin. R.B. 96-09, August 1996.

What's in Store for Home Shopping? Kristen Park, Debra Perosio, Gene A. German, and Edward W. McLaughlin. E.B. 96-05, April 1996.

Supermarket Bakery: *Consumers, Attitudes, Preferences, Behaviors*, Edward W. McLaughlin, Gerard Hawkes, Kristen Park, and Debra Perosio. R.B. 95-01, February 1995.

Category Management: *Current Status and Future Outlook*, Edward W. McLaughlin and Gerard F. Hawkes. E.B. 94-28, December 1994.