Quick response in retailing: components and implementation

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Abstract

Defines and discusses quick response (QR), with its relationship to vendor partnering, short-cycle manufacturing, demand-flow manufacturing, "virtual integration", re-engineering, just-in-time (JIT), and efficient consumer response as an introduction to the results of a study on which firms are implementing QR and at what stage they are regarding their implementation strategy. The results of the study show that 73 per cent of the responding retailers claimed to be implementing some phase of QR. Implementation is slow, however, with only two of 15 QR components reported to be as much as half-implemented among the retail respondents.

Introduction

Quick response (QR), in whole or in part, has been reported to be widely accepted and implemented by retailers of department store-type merchandise. By implementing QR, many retailers have found they can serve customers better, without adversely impacting profits. A QR strategy is reported to result in efficiencies, such as quicker deliveries, faster inventory turns, fewer stock-outs, fewer markdowns and lower inventory investment. As a result of a QR strategy, the time between the sale and replacement of goods on the retailer's shelf can decrease markedly; and retail inventories can be maintained at levels which will meet consumers' demands more often than without QR. Most who have implemented QR report net positive impacts on their financial and operating data, which result in higher profits and/or better pricing to consumers.

The introduction and implementation of QR, however, have been more gradual than has generally been reported. No company has implemented QR with 100 per cent of its vendors. The purpose of the study reported here was to investigate the use of QR and degree of implementation of QR strategies by retail companies in the USA. A discussion and definition of QR is presented along with the study's results.
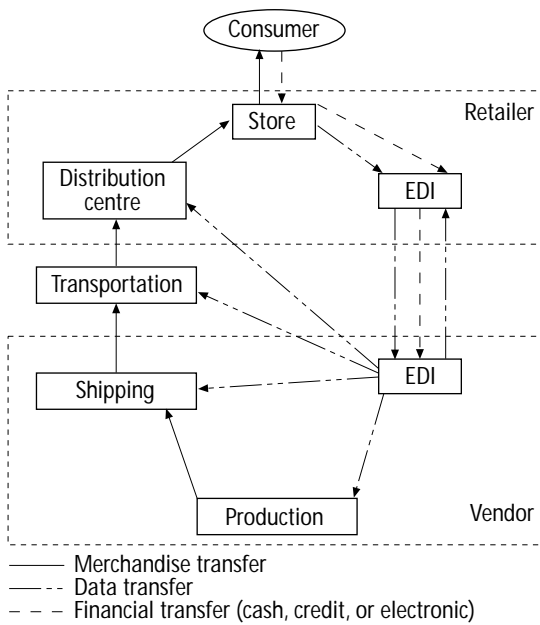
What is quick response?

QR in total application involves on-line electronic communication of sales data from retailers to merchandise vendors, with the vendors promptly supplying retailers the merchandise needed to return the inventory in stores to levels previously determined cooperatively by the retailer and the vendor. Figure 1 is a diagram of the typical flow of merchandise, data and monies in a QR partnership between a retailer and a vendor.

Consumers initiate the QR process as they communicate their needs and wants to the store through their purchases. Merchandise information, such as size, style, colour and brand are collected through scanning bar-

Figure 1 Merchandise, data and financial transfer with quick response

The objective cannot be to have no inventory, except for unusual items or unusual points in time, such as bake shop products at the close of the day or Christmas decorations the day after Christmas.

A QR strategy requires new and different partnerships between vendors and retailers. These relationships generally are unlike those typically found either before a retail firm adopts QR or in firms which have not yet adopted QR. With QR, the retailer agrees to provide the vendor with sales data, by SKU (e.g. colour, style, and size). The vendor agrees to hold these data confidential – the data are to be used only as needed to fulfil the QR programme with the specific retailer. Providing these data requires changes in retailers' attitudes towards vendors. In the past, such detailed information has been held confidential by most retailers; typically, it has not been available outside the retail firm itself.

The implementation of QR strategies requires significant shifts in the roles and responsibilities of people and functions in both the retail firm and the vendor organizations. For effective QR partnerships, retailers and vendors must understand each others' need for information. Agreement must be reached on the information to be supplied to each, on the systems and equipment to be used for transmitting the information, on the timing of both the information and the inventory flow, as well as on factors which are involved in any vendor-retailer transaction, such as terms of sale.

In addition, determination must be made concerning:

- the levels of merchandise to be stocked in each store of the retail firm;
- the locus of responsibility for barcoding prices and item descriptors;
- the frequency of merchandise delivery;
- whether the merchandise will be shipped to a distribution centre;
- if so, whether the goods will be separately bundled and marked for the individual selling unit.

Transportation systems and timing of merchandise shipments must be an integral part of QR if the process is to reach its full potential.

Generally, without QR, most such dimensions of merchandising have been controlled by the retailer's merchandising and buying staff. However, with QR the retailer and the

codes. This information is sent to the vendor via electronic data interchange (EDI) rather than the typical process of remitting a purchase order. These sales data are compared with the inventory model for the store. Production is ordered for the specific items needed to restore the inventory to the model's requirements. Notification of the expected shipping data is transmitted to the shipper and the retailer.

Production orders are transmitted to the plant where the goods are produced. The merchandise is packed and shipped to the retailer. The cycle is complete when floor-ready merchandise arrives at the store. The linkages to effect QR require extensive changes in working relationships between retailers and vendors, as well as systems changes in the links in the chain of distribution from manufacturers to consumers.

Quick response partnerships

In retailing, it is virtually impossible to plan or to schedule "production" – that is, the demand by consumers for specific merchandise, especially for individual stock-keeping units (SKUs). At any point in time, a retailer needs to try to have a wide enough variety of merchandise to satisfy the wants and needs of the customers who come into the store on that particular day. Thus, in order that consumers' desires be satisfied, merchandisers must strive to maintain a complete inventory at all times.

vendor must reach agreement on these factors in advance of shipment of merchandise. Thus, with full implementation of QR strategies, the buying and merchandising roles in retailing generally no longer involve many of the aspects of day-to-day re-ordering which typically have required significant shares of the time and effort of buyers and merchandisers. Rather, with QR buying and merchandising, responsibilities emphasize detailed seasonal planning of merchandise lines and items (plans which the vendor will implement), developing and maintaining good relationships with vendors, and the research necessary for the introduction of new items and lines[1-5].

Once a QR system is functioning, inventory plans should not be adjusted by either the retailer or the vendor. Any necessary changes are accomplished as reactions to the model of expected sales which has been developed by the retailer co-operatively with the vendor. The model which is used to determine the amount of merchandise needed by the retailer allows for minimum inventory levels, as well as the necessary changes in stock levels resulting from seasonal, promotional, or other shifts in consumer demand. Without such a variable model, retail buyers would find it necessary to interfere with the automatic reordering features of QR, as demand changed.

Many retail firms which have adopted QR, as well as observers of the growth of this strategy, report that the primary key to success is management's full support and enthusiasm for the QR strategy and for what QR means to the firm. Both the retail firm's and the vendor's top management must be committed to QR and must understand the impact on the organization of its implementation. Each must communicate commitment to QR as well as the implications of that commitment to all involved. The managements must instil trust and confidence in the strategy and between all the personnel of the organizations that interface with this strategy, including merchandising, buying, shipping and receiving, inventory control and accounting staffs[6,7].

As a result of their altered relationships, vendors as well as retailers must make organizational changes. Quick response requires new communication linkages and systems. Also, unless the vendor already does short-cycle manufacturing, QR usually requires a shift to such smaller production runs in order that more frequent, smaller shipments can be made to retailers. The full commitment of vendors' top management is as important as it is with retailers' management.

When vendors enter QR partnerships, they also have to adapt to demand flow manufacturing (DFM), where production runs are customer driven rather than forecast driven. Although this may place a burden on the vendor (in terms of scheduling), DFM typically provides the benefit of a lower risk of manufacturing goods which are becoming unpopular with consumers (i.e. unfashionable)[8-11].

One of the most important advantages accruing to vendors as the result of QR partnerships is the virtual guarantee of relatively steady demand from the retailers with whom they have entered into QR relationships. QR partnerships involve a commitment from the retailers to continue to sell the vendor's line of merchandise over a period of time, so long as the vendor supplies merchandise as specified and consumer demand continues.

These continuing relationships with retailers and the vendors' adapting to QR and supplying inventory more rapidly, reportedly are "giving hope to the United States' clothing manufacturers" in their concerns about losing business to offshore producers of apparel. In a series on the apparel industry on National Public Radio, *Morning Edition,* on 19 December 1994, the significance of QR to the US apparel industry was highlighted. In response to the statement: "When NAFTA and GATT were discussed, there were predictions of disaster in the US clothing industry", Jan Hammond said: "QR could guarantee that the American textile industry will survive free trade and parts may even prosper".

Virtual integration

Some have called QR "virtual integration" of the channels of distribution. Virtual integration is a form of virtual reality – integration is simulated in the former, reality is simulated in the latter. QR interrelationships between vendors and retailers produce vertical integration of operation and control of the channels, without integration of ownership of the channel. However, QR is not vertical integration in the usual sense. Vertical integration implies joint ownership as well as joint operation, but in QR there is no requirement that the vendor and the retailer be commonly owned[12].

Quick response and re-engineering

Business process re-engineering, an innovative management technique, is offering potential for developing efficiencies and thus cost savings, in many types of business. The best known and most common application of re-engineering techniques to retailing of department store-type merchandise is QR. When adopting QR, timing, amount and frequency of the acquisition and transfer of merchandise between resources and retailers has to be "re-engineered".

The goal of re-engineering is to determine the best method for producing and/or distributing products or services. When re-engineering, the objectives of the firm (e.g. producing goods and getting them to retailers as efficiently as possible) must be described and analysed. The jobs which have to be accomplished are defined, with all assumptions, procedures and systems questioned. The most efficient and effective approach to the process is determined. Existing concepts or processes may be considered, but only as some of several potential ways to handle the job. The resulting systems and procedures may be quite different from, or they may be variations on, existing procedures. Typically, business process re-engineering involves significant shifts in a firm's organization and in the responsibilities of individuals concerned, as well as new systems. The resulting organizations and systems may resemble only in limited ways those which the firm has operated in the past, but the job is accomplished more efficiently[13,14].

Like most re-engineered systems, QR involves more extensive information technology than has typically existed in most firms, especially retail. The linkages between resources and retailers, once partnerships have been arranged, are accomplished by use of EDI. EDI typically replaces some of the personnel and much of the paperwork previously required for transmitting information internally and between vendors and retailers. The changes in systems are comprehensive; the information needed to keep merchandise flowing is fed automatically from the point of sale to the resource.

Just-in-time

With QR strategy implementation, vendors speedily ship merchandise to retailers to replace merchandise that has been purchased by consumers promptly. A strategy not unlike QR is also used by some vendors to acquire automatically and rapidly, from their suppliers, materials to produce the finished goods. The vendor system, called just-in-time (JIT), however, differs from QR in some important aspects.

JIT, one form of re-engineering, was used at the Nippon Wireless and Telegraph Company in Japan in the early 1960s[15]. Since that time JIT concepts have been adopted by many other firms. Most applications of JIT have been in manufacturing in which production usually can be planned and scheduled, rather than in retailing, where it is impossible to forecast the timing of individual sales transactions. In manufacturing, however, if JIT is used, materials used in production are not inventoried; rather, materials are scheduled for receipt only as needed[16].

The underlying principle of JIT is to keep raw or semi-finished goods' inventories as low as possible, maintaining no stock except what is needed for immediate production. Raw materials or semi-finished goods are supplied to the JIT finished-goods' manufacturer frequently and at short notice. Thus, the inventory investment necessary when using JIT is close to zero[17].

The objective of JIT differs from that of QR in that JIT minimizes the inventory necessary for production while QR's objective is to guarantee that desired merchandise is available in retail stores. Retail inventory needs to be sufficient to encompass the unpredictable variations in consumer demands. Also, QR differs from JIT in that partnerships between the suppliers and those being supplied are an essential aspect of QR; partnerships, however, are not necessary with JIT. With QR, both the vendor's and the retailer's organizations and systems must change because of the shifts in responsibility and authority for merchandising, scheduling and distribution. Many vendors who report successful experiences with QR also use JIT. These manufacturers experience lower inventory investment in raw and semi-finished goods[18,19].

Efficient consumer response

A few of the food and/or drug chains (e.g. Tesco, Shaws) have adopted a system, similar in concept to QR, called efficient consumer response (ECR). In ECR, the thinking behind QR is adapted to the systems and logistics of food and drug distribution. For example, as in QR, scanned customer sales transaction data

are transmitted to the distributors in order that the products needed are supplied to the retailer in as timely a manner as possible[20, pp. 115-17; 21-26].

Even though the basic concepts are similar, there are some important differences between ECR and QR. These differences may be attributed to the differences between food and department store-type distribution. Most products sold through supermarkets are provided in factory-packed cases. Thus, if consumer sales data are used for ordering purposes, they must be aggregated at the case level. In addition, item movement rate in a typical food store is much faster than it is in most department, speciality or discount stores. It has been estimated, however, that firms can reduce customer prices by about 11 per cent in food products which are involved in an ECR system[24].

Today, however, some practices of super-market and drug retailers impede the success of ECR. QR-type partnerships can be difficult to develop because of adversarial relationships between many food or drug retailers together with their resourcers. Many of these retailers, in attempts to control costs, take extra advantage of special vendor prices. These price schemes include "deal buying", in which the retailer is offered a special price for a specified period of time. This leads some retailers to "forward buy" when a deal is offered, resulting in the retailers purchasing more merchandise than normal. Also, some of these retailers take advantage of regional price differences and buy in an area which has a lower price, and then trans-ship to other areas in which the retailer has stores. These kinds of practices are counter to the trust which must be developed between vendors and retailers for successful QR or ECR relationships[24].

Retail implementation of QR

The extent of the use of QR varies among retailers. QR partnerships between retailers and vendors reportedly are developing rapidly. Some partnerships are fully implemented; others are only partially implemented. Some retailers report that they are implementing QR when they are using EDI solely for the transmission of purchase and shipping information, while other retailers are using QR throughout much of their merchandise logistics[27].

The retail firms which have indicated some involvement with QR implementation include a wide array of retailers, from specialty stores, to department and discount stores. Appendix 1 lists retail firms which are reported to be using QR (presumably to varying extents) and was drawn up based on information in trade publications such as *Bobbin, Chain Store Age Executive, Discount Merchandiser, Editor & Publisher, Industry Week, RIS News, Stores* and *Textile World.*

Appendix 2 lists vendors which have entered QR partnerships with retailers, also based on the preceding sources. It might be expected that most of the vendors would be apparel manufacturers. It is surprising, therefore, to find many non-apparel firms on this list. Most of the discussions about the implementation of QR have been on the value to be obtained from using this strategy with apparel, in which there is a wide variety of SKUs. However, even though the technique was developed and has seen most progress in apparel, it is apparent that QR is adaptable and applicable to many markedly different types of merchandise[28].

Usage survey

For at least ten years there has been information on QR in retailing in trade publications. Some retail companies have been cited as the early developers and proponents of QR. However, questions have surfaced as to whether they are the only companies utilizing these new strategies and associated technologies. In addition to identifying who is implementing QR, it is also important to determine the extent of implementation. Thus a study of the extent of usage was conducted.

Methodolgy

A questionnaire was developed to answer the following questions:
- What percentage of retail apparel firms are implementing QR strategies and technologies?
- What is the degree of implementation of these strategies and technologies?

The questionnaire was pre-tested through personal interviews with 20 retail executives. Information was collected for the company on years in business, annual sales volume, number of stores and location and type of stores. Fifteen QR stages were identified for

the respondents to indicate their levels or degrees of implementation, on a Likert-type scale.

The sample

A mailing list of retail executives' names and company addresses was rented from a list brokerage firm. From the list, 378 retail companies were identified for inclusion in the study. Additionally, 99 names of major retailers in the USA were added to this list from the following sources: "Top 1000 department and speciality store lists" [29,30], "The kwik index of the top 59 discount stores" [31], *Fairchild's Financial Index* [32], *Standard and Poor's Register of Corporate Directors and Executives* [33], *The Directory of Corporate Affiliations* [34,35] and the *Million Dollar Directory* [36]. The total sample consisted of executives from 477 retail companies in the USA.

Questionnaires, personally addressed cover letters and stamped return envelopes were mailed first class to an individual in each company who held one of the following positions: president, chief executive officer, chief financial officer, chief operating officer, director of management information systems, or director of quick response. These individuals were chosen because of their assumed knowledge of the operations and technology areas of retailing. A follow-up postcard was sent a week later to all on the mailing list, thanking them for their participation and reminding them to return the survey. Two weeks after the postcard, non-respondents were mailed, first class, another questionnaire, stamped return envelope and a different personalized cover letter requesting participation. Four weeks later a final request was sent, certified mail, to all non-respondents.

Results

Of the 477 questionnaires mailed, 134 usable surveys were returned. The average number of years the retailers responding had been in business was 70, with a minimum of two and a maximum of 172 years. The average annual sales volume was US$1.2 billion, with a minimum of US$3 million and a maximum of US$31 billion. The majority of the responding companies were department stores; the second largest category reporting was speciality apparel stores. Other responding retail companies included discount department stores, mass merchandisers, off-price stores

and speciality stores. The responding retail companies represented every region in the continental USA plus Alaska and Hawaii (see Table I).

For this study, the researchers decided that any retail company using EDI, automatic replenishment systems or barcodes would be designated a "user" of QR. This does not necessarily indicate, however, that the company had adopted QR business strategies.

It was found that 98 of the responding companies (73 per cent) were using EDI, automatic replenishment systems, and/or barcodes. Characteristics of both "users" and "non-users" are also presented in Table I. Although statistical analyses for significant differences were not calculated, it appears that "users" of QR typically have more stores and

Table I Respondent characteristics

Characteristic	Total sample	Non-users QR	Users QR
Average number of years in business	70	67	71
Average annual sales volume ($million)	1,184	113	1,442
Average number of stores	153	85	168
Types of stores[a]:			
Speciality apparel	38	4	34
Speciality hardlines	4	2	2
Department	56	7	49
Discount department	13	1	12
Mass merchandiser	10	1	9
Off-price	8	2	6
Other[b]	15	7	8
Location of stores[c]:			
New England	39	7	32
Mid-Atlantic	55	7	48
South Atlantic	51	7	46
East South Central	46	9	37
East North Central	59	8	51
West North Central	43	5	38
South West Central	40	8	32
Mountain	43	6	37
Pacific	43	7	36
Alaska, Hawaii	8	0	0

Notes:
[a] Of the 134 companies responding to the survey, ten reported they operated two types of stores
[b] The "other" stores category included: hobby and craft, drug, uniform, floral, general merchandise, wholesale club, variety, sporting goods and discount gifts
[c] Most companies indicated more than one location in which they had stores

a higher average annual sales volume than do "non-users" of QR.

The participating firms reported that their merchandise was not only basic, but also both fashionable and seasonal (see Table II). The department store-type merchandise reported to be most commonly acquired by retailers through QR strategies has been merchandise that is reorderable and relatively basic, rather than fashion items that are not usually reordered. Most retailers who have adopted a QR strategy are not implementing it in fashion areas presumably because of their short life cycles. A retailer's aims with most fashion merchandise are to have the right selection to satisfy the customers and to replace sold merchandise with new items, rather than with items that are identical to that which has been stocked. Generally, a fashion department needs merchandise which reflect fresh, new looks, with variety, rather than relatively "timeless" merchandise.

Data in Table II indicate that "advanced users" of QR tend to stock more basic merchandise than do "non-users" or "beginning users" of QR. The data presented do not precisely delineate "users" of QR (in the beginning or advanced stages) from "non-users" of QR. Rather, they may indicate that those companies which are "users" of QR have progressed more quickly with implementation because the company carries a higher percentage of basic than of seasonal or fashionable merchandise.

Table II Types of merchandise sold by stores at various levels of implementation

| Type of merchandise | Usage of QR as percentage | | |
	Non-users (n = 25)	Beginners (n = 92)	Advanced (n = 13)
Basic (year round)	47	34	49
Seasonal (12-22 week life cycle)	36	34	30
Fashion (5-10 week life cycle)	17	33	20

Notes:

Non-users of QR were those which reported their company was not involved with any of the following technologies: barcode scanning, EDI, automatic replenishment systems, or shipping container marking with barcodes

Beginner users of QR were those which reported use of barcode scanning

Advanced users of QR were those which reported use of barcode scanning plus at least one other technology

Some experiments in the use of QR in fashion merchandise have been reported in the press. The results of these experiments, however, are generally inconclusive. In a recent article in *Stores* magazine, it was pointed out that for many fashion items (e.g. cosmetics, some handbags, and lingerie):

- QR can be applied effectively;
- the degree of seasonal variations is diminishing;
- and QR can minimize risk exposure.

Furthermore, the ultimate use of QR in fashion will be when a customer's garment needs would be developed electronically with a "body scanner", with such data transmitted to the vendor where the garment is made to order[37].

Quick response strategies assist in producing important information – information which, if properly developed and used, can provide indications of trends in fashion, that is of colour, style, line, etc. From this information, buyers and vendors could have early indications of shifts in – or of loyalty to – selected aspects of fashion. If pursued over a sufficient period of time, such information should provide buyers with tools which, while not substituting their judgement, will amplify their abilities to satisfy customers with better timing of merchandise and/or with better selections of merchandise.

The second question in this study addressed the stage or extent of each company's implementation of QR strategies and technologies. The 15 components of QR developed to measure implementation are presented in Table III, along with the percentages of implementation.

Only two components have a mean of over 50 per cent implementation. These are the use of electronic POS equipment and barcode marking by the retailer. We believe that the data in this table clearly show that although retail apparel companies profess their induction into the ranks of QR implementers, there are only a few implementing QR at any significant level.

Many retailers perceive the benefits of QR, but implementation is a long process beginning with a change in management's mind set and extensive training for all executives involved. This must take place as the technology for POS terminals, EDI linkages and barcoding are being determined. Next, the training has to be extended throughout the firm;

Table III Degree of implementation of QR

Quick response component	Average percentage
Use of electronic POS equipment	84
Barcode marking by retailer	52
Promotional price look-up system	43
Strategic organizational planning for QR	43
Use of each register wanding (UPC scanning)	41
Full price look-up system	40
Training of key employees about QR changes	36
Automatic replenishment of basic goods	35
Vendor-marked merchandise	34
Pre-season planning with vendor	32
Automatic forecasting for staple goods	26
Electronic data interchange (EDI)	25
Store receipt of products directly from vendor	23
Bar-coded shipping container labels	20
Automatic forecasting for fashion goods	13

Note:
Degree (as a percentage) to which each company has implemented each QR component:

0	= No implementation
1-49	= Implementation is in the beginning stages
50	= Implementation is half completed
51-99	= Implementation is in advanced stages
100	= Fully implemented

then, and only then, can the benefits of QR partnerships begin to be seen.

Future of QR

It is expected that there will be no slow-down in the establishment and implementation of QR partnerships between vendors and retailers in the USA. The benefits that accrue to both parties through partnership linkages will grow as more information on QR systems becomes available, as more accurate and appropriate models are developed and as both vendors and retailers become more experienced with, and confident in, the use of QR strategies.

Even though more benefits can be obtained from QR by large firms, QR does not require that either the retailer or the vendor have large sales volumes to obtain significant benefits from implementing a QR strategy. Reports of successful QR experiences in large firms are encouraging smaller firms to become involved with QR. Because some smaller firms may not find it practicable to set up EDI for their sole use, service firms which perform this function are developing.

The most successful applications of QR will continue to be in basic, staple merchandise which is re-ordered and which customers expect the retail store to continue to carry for more than one season. Some shorter life-cycle merchandise can and will have applications for QR. Fashion merchandisers can benefit from QR by the use of QR data to obtain more guidance in fashion trends, such as style, colour or line.

QR strategies offer more to retailers for improving productivity than has been available from any other strategy or system in over 50 years. Over the years, the service sector of the economy, led by retailing, has developed few methods or systems which contribute to improved productivity in a period in which manufacturing has successfully introduced many changes which have resulted in increased efficiency. Other than the development of self-service (not only in retail stores, but also in such areas as food service and banking) and mainly back-office use of computing equipment for bookkeeping and other record keeping, very little has occurred to improve productivity in the service sector of the economy. Many attempts have been made at trying to make ordering and restocking of merchandise more efficient (e.g. through model stock plans, vendors assuming the stock maintenance function, automatic re-ordering schemes and merchandise management accounting). However, none has had as significant an impact on retailing as QR[38].

It is important to remember that this increased efficiency from QR is acquired without impinging on customer service or satisfaction, as did self-service. Self-service required customers to assume some of the efforts that had been the retailer's – selecting the desired items from store displays and carrying them to a sales counter. Self-service was not readily accepted by many customers who wanted to continue to receive selling service, or by retailers who believed that full service was important to their customers.

Furthermore, QR provides consumers with more complete and satisfying merchandise – fewer stock outs, wider selection of wanted merchandise and more currently desirable styles – with no diminution of service levels; and, when the cost savings are passed on to consumers, lower prices can result.

QR is a win-win-win situation for retailers and vendors *and* for consumers in the challenge of providing customers with the merchandise they desire. At the same time, QR is offering ways to improve productivity in the service sector of the economy and for many manufacturers who supply that service sector.

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Appendix 1. Retail firms reporting QR strategies

Baby Superstore
Bloomingdale's
Boscov's Department Store
Caldor
Carter Hawley Hale
Conran
Costco/Price Club
Dayton Hudson Company
Designs Exclusively by Levi Strauss & Company

Dillard Department Stores
Eaton Department Stores
Federated Department Stores
Frey Meyer, Inc.
Goody's
Hess Department Stores
Higbee
Hills
J.C. Penney Company, Inc.
Kmart
KG Men's Stores
McRae's
The May Company
Meijers
Mercantile Stores Company
Mervyn's
Montgomery Ward
Neiman Marcus
Rose's
Saks Fifth Avenue
Sears Roebuck
Strawbridge & Clothier
Super-Rite
Valu-Rite
Wal*Mart

Appendix 2. Vendors reporting QR partnerships with retailers

I. Appel
Alexis
Ambassador
Amory Garment Co.
Arrow Co., Inc.
Bali
Bernard Chaus, Inc.
Black & Decker
Brown Shoe
Bugle BoyBuxton
Chalk Line, Inc.
Cluett/Peabody
Cone Mills
Crosgill, Inc.
Custom Clothing Technology Corp.
Dundee Mills
EKCO Housewares
Estee Lauder, Inc.
Fabricant
Farah

Fast Clothing, Inc.
General Electric
Girband
Haggar Apparel Co.
Hanes
Harbor Seal
Henry I. Segel Co.
Henson Kickernick
Huffy Co.
Jockey International
KYM
Lanier
Laura Ashley
Lee
Lenox Crystal and China
Levi Strauss & Co.
Maidenform
Milliken & Co.
Next Day Apparel
O'Bryan Brothers
Olga
Oxford Shirtings
Palm Beach Co.
Pennaco
Phillips Consumer Electronics
Pillowtex Corp.
Playtex
Polo Ralph Lauren
Proctor & Gamble
Satisfied Sport
Schwab Co.
Second Skin Swimwear
Sport Obermeyer
Spring's Industries
Stride Rite
Sunweave
Swank, Inc.
Wrangler
Toll Gate Garment Corp.
Totes Inc.
Trans Apparel
Tultex
U.S. Hosiery
VF Corporation
Van Heusen
Warners
Warren Featherbone
West Point Pepperell