

## **e-Business in Consumer Packaged Goods Industry: A Case Study**

*Michele Gribbins, Chandrasekar Subramaniam and Michael J. Shaw*

Department of Business Administration, University of Illinois at Urbana-Champaign,  
Urbana, IL 61801  
[mgribbin@uiuc.edu](mailto:mgribbin@uiuc.edu)

Department of Business Administration, University of Illinois at Urbana-Champaign,  
Urbana, IL 61801  
[csubrama@uiuc.edu](mailto:csubrama@uiuc.edu)

Department of Business Administration, and Beckman Institute for Advanced Science and  
Technology, University of Illinois at Urbana-Champaign,  
Urbana, IL 61801  
[m-shaw2@uiuc.edu](mailto:m-shaw2@uiuc.edu)

## I INTRODUCTION

In the fast changing world of electronic commerce, no industry has been left untouched by the impact of the Web. The Internet has caused fundamental shifts in the way consumers shop for and purchase goods and services. This shift has the most impact on the consumer packaged goods industry (CPGI), including the major brand name manufacturers, their suppliers, distributors, retailers and advertisers. As a pioneer in using IT, Procter & Gamble (P&G), a major CPGI manufacturer, initiated several e-business projects. Recently, P&G and Microsoft, the software giant, recently teamed up to develop a Web-based supply chain solution capable of 50 percent reduction in inventory while reducing retail out-of-stock conditions by 25 percent ([www.pg.com/news](http://www.pg.com/news)). As these initiatives move from trial and learning stage to actual roll-out, it becomes important to evaluate P&G's e-business initiatives to learn from its experience and to formulate the right strategies for full-scale adoption of Web technology.

In this context, several questions arise relating to e-business practice and research. What are the e-business opportunities created by the Web in the CPG industry? How will a manufacturer know if it has fully leveraged these opportunities? What competencies are required to migrate all its business to the Web? What are the implications of the e-business strategies of this manufacturer for the other players in the supply chain? We try to answer these questions in this chapter. More specifically, this chapter looks at the e-business opportunities in consumer goods industry and presents the Web initiatives of a large manufacturer in this industry. The e-business strategies and their implications for the supply chain are then studied in detail.

## II CPG INDUSTRY

Consumer packaged goods are the everyday use items that consumers purchase mostly from supermarkets. They include food and beverages, cosmetics, skin care, hair care, feminine care, home cleaning, and detergents. The most striking feature of this industry is the wide range of consumer needs and preferences involved. The buyers can be considered fragmented in the sense that there is no single marketing strategy that can effectively address all consumer needs. A retailer has a particularly important role to fulfill in the supply chain i.e. aggregation of demand and supply. We discuss below the unique characteristics of the CPG Industry that have significance for the use of Web.

***The CPGI consists of low-value products that have can be considered “mundane.”*** Consumer goods can be considered non-durable and most individual purchases of consumer products are of low value. The margins for the manufacturer and the retailer on these products are very low, but they rely on the high turnover of the products to be profitable. Thus, it is critical to provide a very good product and channel experience to the consumer on a continual basis to ensure maximum consumer satisfaction.

***Products within the CPGI have short-product lives and are frequently re-purchased.*** Many of these products are considered necessities and demand is typically steady. The consumer's need from many products within the industry is long-term (e.g., feminine care products), with some being life-long (e.g., deodorant, soaps). However, the demand for a specific brand within the CPGI is influenced by several factors, including price of the product, the consumer's

discretionary household income, the demographics of consumers, and the innovation of the product (*Standard & Poor's*, 2000).

***The CPGI is highly competitive across brands.*** Consumer products are closely associated with and differentiated by brands. Brands are an important way, other than the actual product experience, that the product benefits are communicated to the consumer. Consequently, consumer goods manufacturers spend enormous efforts at building their brands and media is a critical component of brand building. Major consumer goods manufacturers, such as Procter & Gamble and Unilever are known to be big advertisers in television and radio.

***It is difficult for CPGI companies to raise product prices.*** The CPGI is saturated (*Standard & Poor's*, 2000) and highly competitive. This makes it difficult for companies to raise prices despite any increases in raw materials cost.

***It is becoming more difficult for consumers to differentiate competing brands as the number of product introductions is continually increasing.*** Companies within the industry are frequently enhancing older product lines, while new product lines are also be introduced. The innovativeness of a product can enhance the demand for the product. Being the first company to market a new product type is advantageous within this industry as it takes considerable effort to lure customers away (*Standard & Poor's*, 2000). However, as more brands and product features are offered, it will become harder for consumers to differentiate among the products that are offered.

***It is difficult to develop brand loyalty since switching costs are low.*** Even though the value of each purchase is relatively small, a loyal consumer is likely to purchase the products several times over his/her lifetime. But the low switching costs make consumers to easily switch their brands, if their experience with the existing brands is not satisfactory. Thus, organizations are constantly struggling to increase the bond between the consumer and the brand, by personalizing the products and offering superior customer service. However, brands that are strong within the industry tend to develop a competitive advantage through the loyalty of its users.

***Private-label goods are becoming more accepted by consumers.*** However, some branded products are protected by emotional factors and consumer doubts regarding the quality of the private-label good (e.g. health and beauty products).

***Low growth in sales is expected in the United States.*** Only small increases in the U.S. population and in the number of U.S. households are expected in upcoming years. In order to increase sales, CPGI players will need to gain market share from competition in the domestic market or they will need to focus on strengthening their positions in international markets. Finding new ways to reduce current costs also will become important as companies work to improve profitability in this tight market.

***An aging population will change consumption patterns.*** This will lower the demand for certain products types (e.g., household maintenance products) while other product types, specifically those with features that appeal to older consumers (e.g., anti-aging health care products), will grow in demand.

**Women are the primary purchasers of CPGI products.** Women form the major target group for the messages of consumer goods companies. Several consumer products, such as skin care and beauty care, are addressed directly to women. Other products, such as food and beverages, home cleaning and detergents are addressed to women as the primary decision makers or decision influencers. In addition to the media choice, companies have to decide on the type of programs they sponsor, so as to attract the attention of their target audience.

**New distribution channels are needed to meet today's consumers.** CPGI companies need to expand their distribution channel from the traditional outlets (e.g., Food, Drug, Mass Merchandising Retailer) to other outlets that will be accessible to consumers.

As we can see from the above characteristics, marketing consumer goods involves constant feedback from consumers about their experience with the products and the ability to rapidly respond to the consumer needs and preferences. Further, since the manufacturers are far removed from the consumers, they have to rely on the information supplied by the retailers to understand the demand for their products. With the emergence of the Web as a new channel, consumer goods manufacturers are hoping to overcome these limitations and create a closer relationship with their consumers in order to serve them better and be their preferred brands.

**Table 1: Uniqueness of CPGI**

<b>CHARACTERISTICS OF PRODUCTS</b>	<b>CHARACTERISTICS OF INDUSTRY</b>
<ul style="list-style-type: none"> <li>• Low-value</li> <li>• Mundane</li> <li>• Non-durable</li> <li>• Low margin</li> <li>• Frequently re-purchased</li> <li>• Short-product life</li> <li>• Considered necessary</li> <li>• Low switching costs</li> <li>• Women are primary purchasers</li> <li>• Product selection influenced by: price, discretionary household income, consumer demographics, and product features</li> </ul>	<ul style="list-style-type: none"> <li>• Demand for products is steady</li> <li>• Highly-competitive</li> <li>• Difficult to raise product prices</li> <li>• Difficult to develop brand loyalty</li> <li>• Difficult for consumers to differentiate among brands</li> <li>• Product introductions are increasing</li> <li>• Private label goods are becoming more acceptable</li> <li>• Low growth in sales expected in the U.S.</li> <li>• Consumption patterns change as population ages</li> <li>• New distribution channels are needed</li> </ul>

### **III P&G WEB INITIATIVES**

Procter & Gamble (P&G), a key market player within the CPGI, was founded in 1837 in Cincinnati, Ohio. The multibillion-dollar company markets to 140 countries and employs 110,000 people worldwide. It produces over 300 brands that cross a variety of product types. Some of P&G's well-recognized brands include Tide, Jif, Scope, CoverGirl, Crest, and Pampers.

In recent years, P&G has developed numerous e-commerce initiatives that take advantage of the opportunities that derive from the use of web technologies within the CPGI. The initiatives presented here enhance customer relations, improve transactions with supply chain members, and provide employees with access to valuable information.

## Reflect.com

<http://www.reflect.com>

*Objectives/Purpose:* Reflect.com, which was launched by P&G in 1999, is an online retailing website of P&G featuring cosmetics. Customers can take advantage of this direct channel with the manufacturer by answering background questions and selecting preferences on the website. Besides customizing the product itself, customers can select its packaging features, accents, and even name their creation. Within a few days, the customer receives her customized cosmetics, wrapped in bright tissue paper, and delivered in uniquely sized packaging.

*Service/Features:* Reflect.com permits P&G to use its knowledge of product formulations to offer the full-range of possible formula combinations of cosmetics and hair care products that are not available in traditional Food-Drug-Mass Merchandising outlets. The Internet enables P&G to offer customized cosmetic formulations by making it easy for P&G to gather the needed information from the customer (Vanscoy 2000).

The screenshot displays the Reflect.com website interface. At the top, there is a navigation bar with links: ← HOME, create & shop, beauty advisor, my organizer, about us, service, reorder, and shopping bag [0]. The Reflect.com logo is in the top right corner. Below the navigation bar, there is a section for a 'Body Lotion' product. On the left, there is a product image of a lotion bottle and a 'SKIN CARE' category label. On the right, there is a 'Creation...' section featuring a profile picture of Debra Jaliman, a Skin Care Advisor, and a three-step process: 1. Create my formula, 2. Finishing touches, 3. Product summary. Below this, there is a form titled 'Answer these questions to create your product. (scroll if necessary)'. The form contains four questions with dropdown menus: 'How do your legs feel?', 'What is your ethnic background?', 'How much time do you usually spend in the sun each day?', and 'How does your skin tend to feel?'. A 'help' link is provided for the last question. A vertical scrollbar is visible on the right side of the form area. At the bottom left, there are links for 'register' and 'log in'.

**Image 1: Screenshot of Reflect.com**

*Benefits to Consumer:* Reflect.com provides customers with valuable knowledge of cosmetic products. Not only does it assist customers by removing the guesswork out of product selection,

but also it provides customers with information that assists them in using their products once they are received. To help reduce the frustrations associated with online purchasing, the website offers a “concierge service” to assist customers, if needed, during the customization and purchasing process. Additionally, Reflect.com’s return policy, which states that customers who are not satisfied with their purchase can return their product for a full refund, is predominantly displayed throughout the website.

*Benefits to P&G:* Reflect.com offers all combinations of product formulations that other P&G’s brands cannot make available through traditional retailing outlets. More importantly, Reflect.com gives P&G the opportunity to have a direct sales channel with customers, which not only allows P&G to sell products directly to the consumer but it also allows P&G to take full advantage of customer relationship management opportunities. Reflect.com can develop strong relationships with these customers, while encouraging increased customer involvement. Information gathered from customers is used to develop customer profiles that can be used to personalize marketing efforts to customers. Furthermore, the direct channel encourages direct feedback from customers.

*eBusiness Strategies:* Direct-to-Customer Distribution Channel, Product Personalization, Relationship Marketing

### **MoreThanACard**

*<http://www.morethanacard.com>*

*Objectives/Purpose:* In the past, P&G has not utilized the diversity of their brand and product offerings to their advantage. MoreThanACard is one initiative that has tried to take advantage of the variety of P&G offerings by bundling products into care packages.

*Service/Features:* Website visitors can select care packages from a variety of themes (e.g., arrival of baby, new home) and create a personalized card to include. These care packages bundle P&G products from several different product lines within the company and deliver these gifts to the recipient’s door (Vanscoy 2000).



**customer service**

- ... account information
- ... give us your opinion
- ... contact us

**REGISTER** and get  
**FREE** shipping on  
every 3rd bundle!

**Get \$5 OFF** our  
**New Arrival** bundle-  
the perfect gift for a  
**NEW MOM!**

brought to you by:

**homemadesimple**

Give someone a helping hand prepping their house for a special occasion or an upcoming move with a Home Made Simple™ care package. Perfect for spring cleaning, getting a home ready to sell or a moving into a new home. Anyone will appreciate this thoughtful and helpful care package.



**Contents:**

Mr. Clean Wipe-Ups™ (refill - 28 ct), Swiffer® disposable cloths (8 ct), Comet® Powder (lemon - 17 oz), Dawn Power Plus dishwashing liquid (13 fl oz.), Cascade® automatic dishwashing detergent (45 fl oz.), Cascade Rinse Aid (3.5 fl oz.), Febreze® Fabric Spray (16.9 fl oz.), Bounty® paper towels (40 ct), Home Made Simple™ Brochure/Tips, Gift Candle, Personalized gift card

**Image 2: Screenshot of MoreThanACard**

*Benefits to Consumer:* MoreThanACard provides consumers with an outlet to purchase gift packages that can be ordered online. These packages are conveniently sent to the recipient's residence with a personalized gift card enclosed.

*Benefits to P&G:* MoreThanACard is another avenue that P&G has taken to offer direct sales to consumers. Gift packages consist of products from various P&G brands. This allows P&G to bring the power of their various product lines together into one product offering.

*eBusiness Strategies:* Product Bundling, Direct-to-Customer Distribution Channel, Product Personalization, Relationship Marketing

**PG.com, Brand Websites, and Online Communities**

<http://www.pg.com>

*Objectives/Purpose:* P&G's Internet marketing efforts include a corporate website, numerous brand websites, and the sponsorship of online communities. Their corporate website not only provides corporate information but also it showcases the range of P&G brands. Brand websites give information related to products and their use (e.g., stain removal tips, cleaning tips). P&G has also played an active role in the development of several online communities (*European Cosmetic Markets* 2000). The topics of interest to members of these communities

align with the brand that sponsors the site. These initiatives expand their marketing approaches' potential reach to a global market.

*Service/Features:* PG.com features an overview of the company, including financial information, links to brand websites, and special product offers. PG.com unites the company's various brands. Previously, P&G has thrown away the power of all their brands by not putting them all together (Lauf, 2001b).

“Where you can bring value to the consumer, you have room for interactive marketing (Lauf 2001a).” Brand websites try to bring value to brand products. Some brand websites include product selectors and or alternative uses suggestions to bring value to the product (i.e., Pantene, Bounce), while other brand websites try to bring value by providing valuable information (i.e., Tide's Stain Detective). Product selectors are heavily visited on websites because product options can exceed what consumers want to pay attention to (Lauf 2001a). Other brand websites use games (i.e., Crest's Sparkle City game for kids) or online communities (i.e., Pampers Institute) to encourage repeat visits. P&G has also collaborated with non-P&G websites to sponsor online communities (i.e., BeingGirl.com, women.com).

The screenshot shows the PG.com website homepage. At the top left, it says "more than 300 brands you know and trust" and "July 8 2001". There is a "site search" box with a "Go" button and links for "Register", "Contact Us", "Website Feedback", "Site Help", and "Site Map". Below this is a "PRODUCT HELP" section with links for "Product List & Info", "Product Finder", and "Product Feedback". The main navigation bar includes "Home", "Tools & Offers", "Investors", "Jobs", "News & Perspective", and "About P&G". The main content area is titled "Your One-Stop Connection to P&G and Our Brands" and features three sections under "SERVICES AND OFFERS": "Try and Buy" (with a hand holding a product), "Help Us Create" (with a hand holding a pen), and "Sweepstakes and Newsletters" (with a woman's face). To the right, there is a "FEATURE" section for "Tide Kick" with the text "Getting dirty is easy...Getting clean just got easier - with a FREE Tide Kick." and an image of the Tide Kick product. Below this is a paragraph describing the product and a "GET A FREE TIDE KICK" banner.

Image 3: Screenshot of PG.com



Image 4: Screenshot of Pampers.com

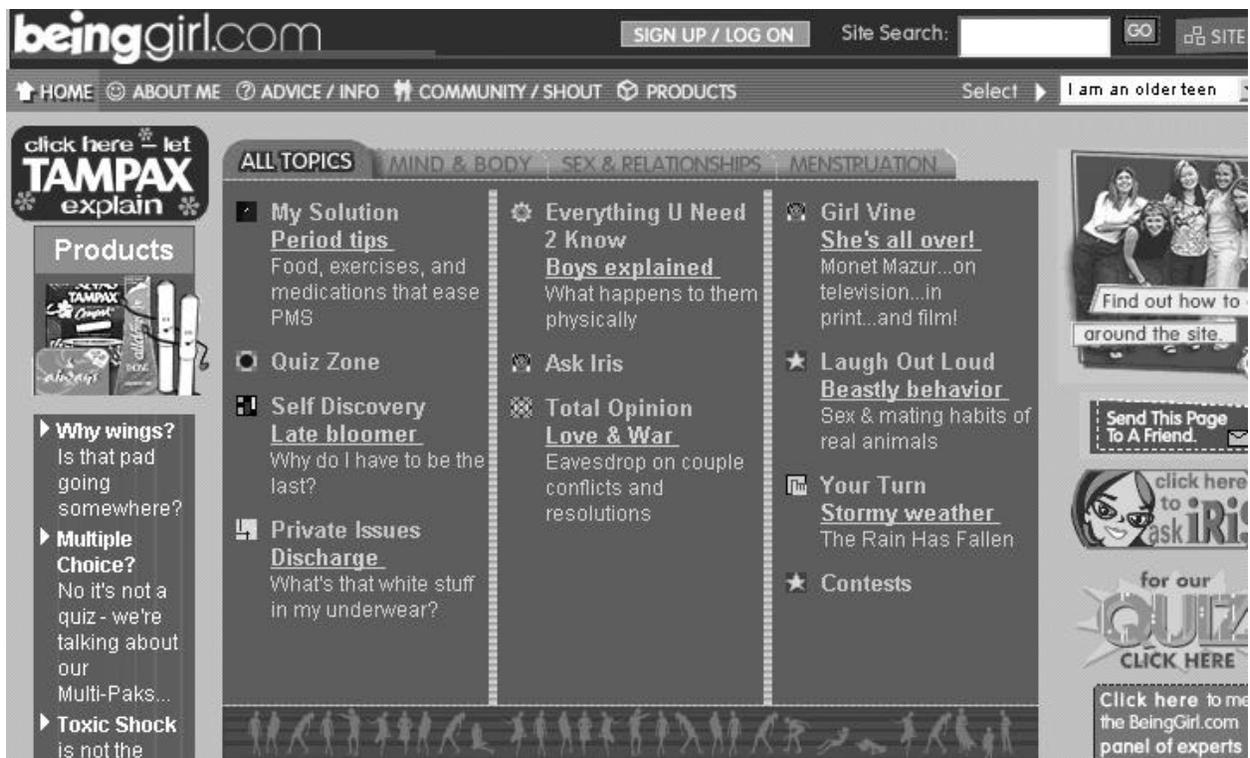


Image 5: Screenshot of BeingGirl.com

*Benefits to Consumer:* Brand websites primarily build consumer awareness about products. In addition to discovering information about certain products, many brand websites allow users to request free samples or order coupons online. Product selectors on brand sites benefit customers by helping them choose the product style that best suits their needs. Online communities, such as the Pampers Institute and BeingGirl.com, encourage the development of a community among visitors through the use of bulletin boards and chatrooms available to members. In fact, Pampers Institute has almost as many registered users as the leading parenting magazine's website (Lauf, 2001b). Furthermore, PG.com and brand websites provide consumers with another customer service outlet in addition to traditional customer service outlets (i.e., retail stores, phone hotlines).

*Benefits to P&G:* P&G benefits from the direct interaction from customers through websites. Time-to-market is a key source of competitive advantage, particularly for products with a life cycle of less than two years. Research suggests that these companies consider the following strategies: get customers' input early in the development process, use engineering capability that rapidly convert customers' needs into product designs, develop cross-functional teams for concurrent engineering, and encourage learning through product modifications (Datar et al. 1997). P&G has incorporated Internet technologies in its consumer research strategies with the objective of reducing cost and time-to-market. For example, traditional consumer research strategies would cost P&G approximately \$25,000 to conduct a concept test for a new product, with the procedure taking two months for completion. By incorporating the use of the Internet into concept testing, procedures have been reduced to two weeks for completion and the cost of concept testing has reduced by \$22,400 per test (*Advertising Age*, 2000). Overall, marketing research costs have been reduced by 50-70% through these strategies (Vanscoy, 2000). Online discussion forums have the potential to replace qualitative (focus-group) testing and quantitative research (*Advertising Age*, 2000).

Additionally, P&G benefits from its sponsorship relationships as well. In addition to providing an outlet for marketing brands, some websites (i.e., Bolt.com) provide P&G with profiling and segmentation data gathered from polls and forums (Promo, Oct. 2000)

P&G has benefited from its changes to product introductions. P&G used the Internet to introduce a new product line, Physique, to the marketplace, rather than the traditional strategy of an intensive advertising campaign. Additionally, PG.com allows visitors to purchase products online. These products are in the beta-testing stage of product development (Vanscoy 2000). For example, P&G has also used the Internet to sell beta-test products (e.g., Crest Whitestrips and Crisco's CookSmart) prior to their introduction in traditional retailing outlets.

Not only do website visitors benefit from product selectors on brand websites, but P&G also benefits from product selectors. First, product selectors encourage customers to be actively involved with a product. Second, proper product selection helps improve customer satisfaction. Third, information gathered from product selectors can help P&G learn more about and better understand their customers.

*eBusiness Strategies:* Personalization, Relationship Marketing, Direct-to-Customer Distribution Channel (test items only), Product Development Efficiency

### **Supply Chain Information Collection Initiatives**

*Objectives/Purpose:* P&G has focused on several projects to help improve the collection and flow of information across their supply chain. The capture and flow of more accurate and timely information can help reduce costs associated with ordering and maintaining an inventory.

*Service/Features:* P&G has been working on implementing an enhanced supply chain management strategy, referred to as “smart packaging.” P&G hopes that their smart packaging initiative, which includes embedding microchips into product containers, will identify when, where, and what specific units of a product are sold. Additionally, P&G has teamed up with Microsoft to improve point-of-sale efficiency. Their system captures real-time point-of-sale data that is aggregated and processed by intelligent algorithms which then identify the products that need restocked, resupplied, and manufactured (P&G Press Release, 2001).

*Benefits to P&G:* Through the smart packaging initiative, the company will be able to track each individual unit from its production through its purchase at the retail outlet. Additionally, P&G hopes that the initiative will continue into the customer’s kitchen. Specific ideas include the capabilities of automatically charging a customer’s bank account via the Internet when the shopper adds a product to their grocery cart and automatically reordering products via the Internet when they run low in the customer’s refrigerator (Vanscoy 2000). Although the data obtained through smart packaging will originally be used for inventory management, P&G hopes that the data eventually will be used throughout the entire supply chain (Vanscoy 2000). Through their supply chain solution with Microsoft, P&G can integrate sales data with its own core operational and business intelligence systems (P&G Press Release, 2001).

*Benefits to Supply Chain:* These initiatives hope to ease the ordering process. Reordering can become more accurate and require less time than current procedures. For instance, their supply chain solution hopes to reduce inventory by 50% while improving out-of-stock retailing conditions by 25% (P&G Press Release, 2001).

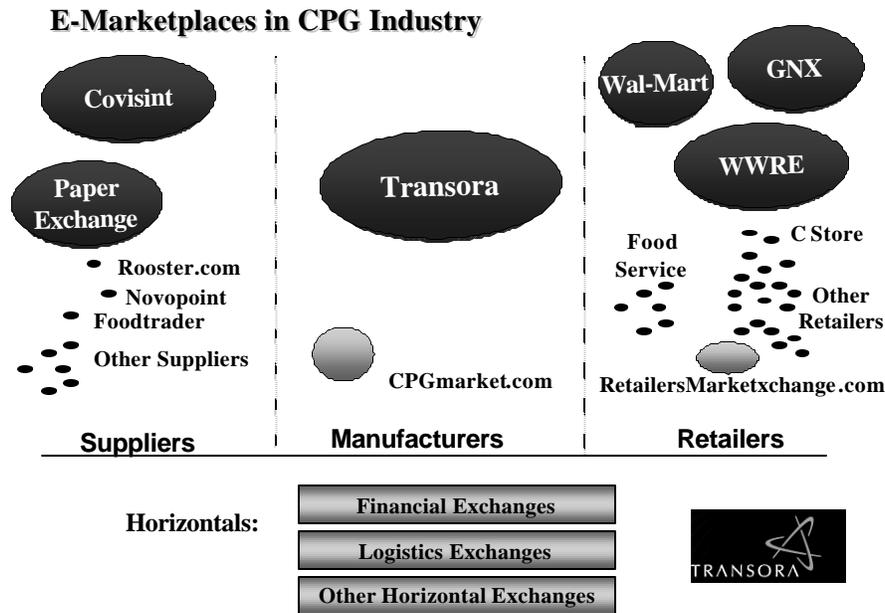
*eBusiness Strategies:* Information Flow Improvement, Supply Chain Efficiency

### **Transora**

***<http://www.transora.com>***

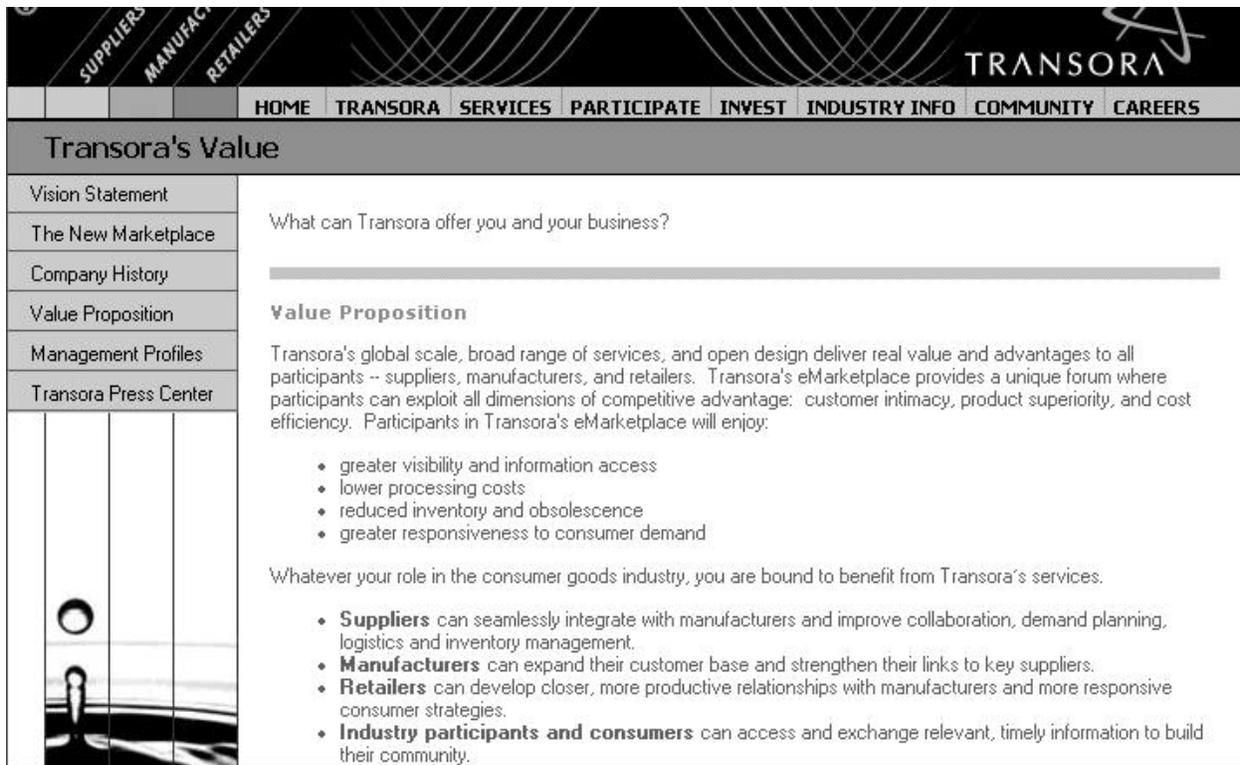
*Objectives/Purpose:* Transora is an online procurement site for the business-to-business consumer packaged goods industry. It is designed to “facilitate cross-industry integration, communication, and cooperation (Krivda, 2001).” The consortium of CPGI members, which currently includes over 80 companies, originated from corporate investors who pledged \$250 million to fund its development (Krivda, 2001). Transora’s CEO Judith Sprieser stated that the collaboration of CPG members resulted from the recognition of a common need set. CPG members realized “that tackling the next level of inefficiencies was too difficult and expensive to

do alone. So they pooled their money and created Transora to help them to exploit the next level of efficiencies and information flow (Krivda, 2001).”



**Image 6: Transora’s e-market structure**

*Service/Features:* Transora’s vision is to “lead the transformation of the consumer products and services industry through a global, open, standards-based, industry-led marketplace that delivers breakthrough value for all industry participants.” Companies are connected through shared standards and shared transaction formats, but the business that is done through the exchange is conducted privately (Krivda, 2001). Transora also provides other value-added services, including collaborative planning, forecasting and replenishment, and the ability to simplify ordering processes and to improve ordering accuracy (PR Newswire 2000). Some investors in Transora include The Coca-Cola Company, Diaego PLC, The Earthgrains Company, Kraft Foods, Inc., Procter & Gamble, H. J. Heinz Company, Sara Lee Corporation, Parmalat and Unilever, NV.



**Image 7: Screenshot of Transora.com**

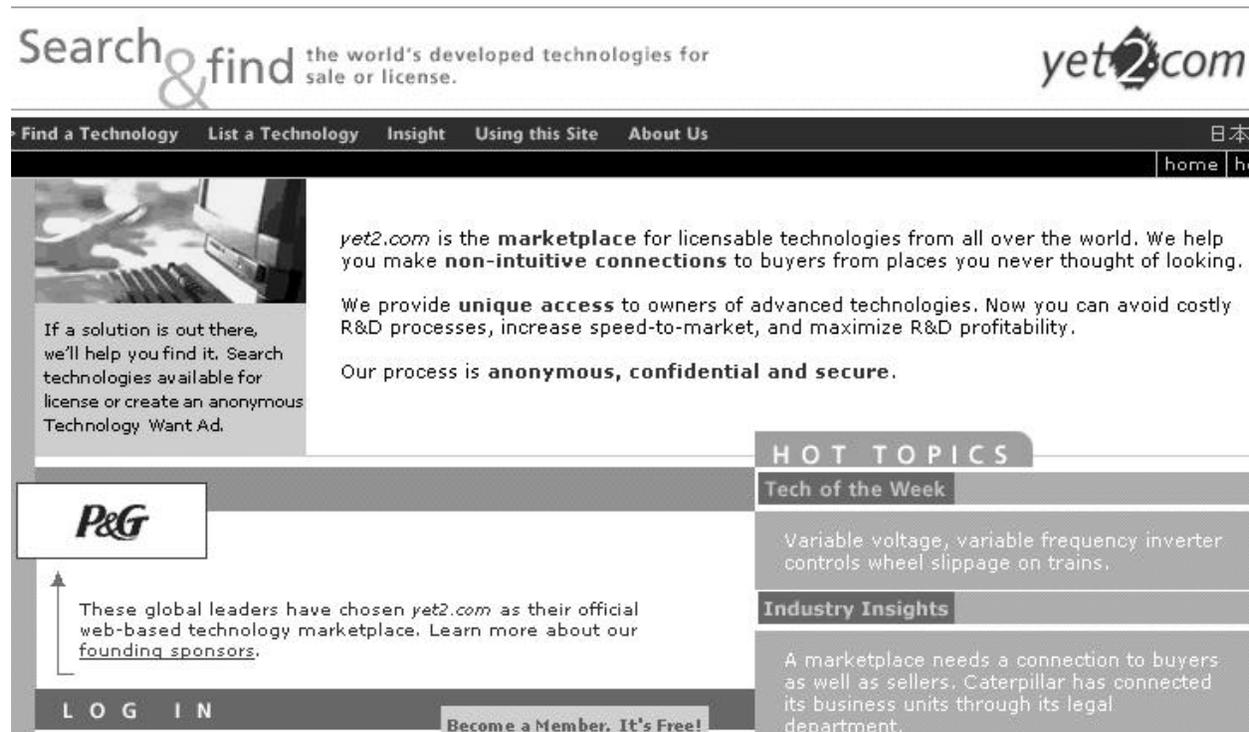
*Benefits to Supply Chain:* All participants in the value chain can benefit from increased connectivity with other members, as well as enhanced automation, and improved inventory management. Suppliers using Transora have access to a large customer base and realize lower procurement and customer acquisition costs compared to traditional channels, while manufacturers benefit from improved customer service with retailers and wholesalers (PR Newswire 2000). In past trials companies saved 22-25% over their typical procurement procedures for indirect materials (PR Newswire 2000).

*Benefits to P&G:* P&G believes a “seamless supply chain” can reduce half the costs and half the time it currently takes to transform raw materials into finished products (BtoB, November 6, 2000). The combined effects of P&G’s participation in Transora, as well as its other supply chain initiatives, could reduce the company’s supply chain cycle by 2-3 days (Vanscoy 2000). This computes to a \$1.5 billion reduction in working capital and a \$100 million savings in inventory management, before considering additional sales that are currently lost when retailers are out-of-stock due to ordering inefficiencies. P&G has set a goal of taking 50% of retailer orders over the Web by the end of 2001 (BtoB, November 6, 2000).

*eBusiness Strategies:* Supply Chain Efficiency, Information Flow Improvement

**Yet2Com**  
<http://www.yet2.com>

*Objectives/Purpose:* Yet2.com is an electronic marketplace that provides the forum for companies and individuals to purchase, sell, license and research intellectual assets. Only a fraction of the billions of dollars spent on research and development is ever commercialized in products. Yet2.com, which was founded in February 1999 with over 50 corporate sponsors, helps companies extract value from undervalued or unused technologies by streamlining the traditionally lengthy and ineffective process of technology transfer.



**Image 8: Screenshot of Yet2.com**

*Service/Features:* Although the market for intellectual properties is estimated at \$105 billion, finding potential buyers for technology has been a difficult and lengthy process. Yet2.com provides an electronic global marketplace dedicated to the transfer of these assets. Owners of intellectual properties can list functional descriptions of their licensable technologies on the website, while technology seekers can use search tools to assist in locating technology that fulfill their needs. Information between owners and seekers are confidentially exchanged until both parties have qualified the other party for the transaction. Once both parties have been qualified, the negotiating occurs offline. Parties are only charged a fee (approximately 10%) when a successful agreement occurs. Present listings include over \$10 billion in investments.

*Benefits to Participants:* The average corporation only markets 20-30 percent of its technological assets. Through Yet2.com listings, sellers can turn these untapped assets into revenues by selling them to companies who can benefit from these properties. Even technologies that are presently marketed by a company could bring additional revenues to sellers, if they have applications for other products and industries. Additionally, both parties benefit

from the reduction in costs associated with identifying companies holding or needing intellectual assets. Without the use of electronic marketplaces, companies would rely on personal networking to identify buyers or sellers for specific assets. The traditional process to market intellectual assets took an average of 12-18 months and was often limited to those companies within their own industry. Yet2.com can significantly reduce the time it takes to identify a transaction partner. Furthermore, its members cross various industries and countries, with over a third of the listed technologies being from outside of the U.S. Overall, Yet2.com features can help companies “avoid costly R&D processes, increase speed-to-market, and maximize R&D profitability.”

*Benefits to P&G:* P&G was one of the founding sponsors of Yet2.com. P&G’s includes descriptions of its intellectual properties to encourage the development of partnerships with other corporations interested in purchasing a license to use P&G patents. Most revenue P&G received from Yet2.com partnerships is pure profit, since the research and development costs involved in establishing the patented item have already been absorbed (Vanscoy 2000). Both marketed products and non-marketed assets have been included. For instance, the enzyme used in Tide detergent can ultimately also be used as a lubricant for oil drilling and as a contact lens cleaner. P&G can also purchase other companies’ assets, which may reduce the time it takes for their own product development.

*eBusiness Strategy:* Market Intellectual Property, Product Development Efficiency

## **Innovation Net**

*Objectives/Purpose:* Innovation Net is an online community for P&G employees. It accelerates innovation and technology transfer by connecting company scientists, engineers and market researchers (P&G Press Release, 2000).

*Service/Features:* Users can search existing reports or add comments to a database for solutions and ideas. The database also suggests readings and newsletters for employees based on the searches that they have conducted on the website (Vanscoy 2000). Additionally, there is a My Idea website that allows employees to send ideas directly to the principal researcher at P&G.

*Benefits to Employees:* P&G’s Innovation Net links 18,000 employees worldwide. It gives employees convenient access to over five million pages of corporate research and knowledge (P&G Press Release, 2000). Also, it develops a community among employees.

*Benefits to P&G:* P&G has used the Internet in its strategy to reduce time in its product development process (Vanscoy 2000). InnovationNet allows employees from different departments of P&G to collaborate more quickly on product design and processing issues. For example, Swiffer, a dust mop product, hit the market in only 18 months. This reduction in time-to-market was attributed to “the Web collaboration of experts who rarely teamed up before (Business Week, 2000).”

*eBusiness Strategy:* Product Development Efficiency, Information Flow Improvement

**Table 2: P&G Electronic Commerce Initiatives**

<b>INITIATIVES</b>	<b>POTENTIAL BENEFITS</b>
<b>1. Reflect.com</b>	<ul style="list-style-type: none"> <li>• Allows P&amp;G to sell products directly to consumers</li> <li>• Allows P&amp;G to offer product formulations that traditional retailing outlets do not carry</li> <li>• Expands businesses' potential reach to a global market</li> <li>• Allows P&amp;G to take advantage of customer relationship management               <ul style="list-style-type: none"> <li>– Personalizes marketing</li> <li>– Customer profiles can be developed</li> <li>– Increases customer involvement</li> <li>– P&amp;G can have direct interaction from customers</li> </ul> </li> </ul>
<b>2. MoreThanACard</b>	<ul style="list-style-type: none"> <li>• Allows P&amp;G to sell products directly to consumers</li> <li>• Allows P&amp;G to bundle products into a personalized gift</li> <li>• Expands businesses' potential reach to a global market</li> <li>• Allows P&amp;G to take advantage of customer relationship management               <ul style="list-style-type: none"> <li>– Personalizes marketing</li> <li>– Customer profiles can be developed</li> <li>– Increases customer involvement</li> <li>– P&amp;G can have direct interaction from customers</li> </ul> </li> </ul>
<b>3. PG.com, Brand Websites, and Online Communities</b>	<ul style="list-style-type: none"> <li>• Allows P&amp;G to sell products directly to consumers</li> <li>• Reduces product development costs</li> <li>• Expands businesses' potential reach to a global market</li> <li>• Provides an additional customer service outlet</li> <li>• Allows P&amp;G to take advantage of customer relationship management               <ul style="list-style-type: none"> <li>– Personalizes marketing</li> <li>– Customer profiles can be developed</li> <li>– Increases customer involvement</li> <li>– P&amp;G can have direct interaction from customers</li> </ul> </li> </ul>
<b>4. Supply Chain Information Collection Initiatives</b>	<ul style="list-style-type: none"> <li>• Improves information sharing               <ul style="list-style-type: none"> <li>– Data is more timely and more accurate</li> <li>– Expands the accessibility of data throughout P&amp;G and supply chain</li> </ul> </li> <li>• Improves point-of-sale efficiency</li> <li>• Improves inventory management</li> <li>• Reduces ordering costs</li> </ul>
<b>5. Transora</b>	<ul style="list-style-type: none"> <li>• Reduces ordering costs</li> <li>• Improves access to data</li> <li>• Strengthens supply chain relationships</li> <li>• Reduces customer acquisition costs</li> <li>• Improves inventory management</li> </ul>
<b>6. Yet2Com</b>	<ul style="list-style-type: none"> <li>• Improves enterprise knowledge management</li> <li>• Reduces product development time</li> <li>• Allows for the sale of intellectual properties</li> <li>• Accelerates the transfer of intellectual assets</li> </ul>
<b>7. Innovation Net</b>	<ul style="list-style-type: none"> <li>• Improves enterprise knowledge management</li> <li>• Reduces product development time</li> <li>• Encourages employee collaboration and input</li> <li>• Develops an employee community</li> </ul>

#### **IV ANALYSIS OF THE WEB INITIATIVES**

The widespread adoption and use of the Internet and Web technologies (e.g. the World Wide Web) have provided companies within the Consumer Product Goods Industry (CPGI), a \$1.3 trillion industry (Krivda, 2001), with several new opportunities that may improve existing business practices or may result in the development of new business models. These opportunities can be categorized into four classifications: Customer Management Opportunities, Supply Chain Opportunities, Inter-Organizational Opportunities, and Within Organization Opportunities. Table 3 provides a summary of these opportunities

**Table 3: Web Opportunities in the CPGI**

<b>OPPORTUNITIES</b>	<b>WHAT DOES IT CHANGE?</b>	<b>WHAT ARE ITS CHALLENGES?</b>
<b><u>CUSTOMER MANAGEMENT OPPORTUNITIES</u></b>		
1. <i>Expands businesses' potential reach to a global market</i>	<ul style="list-style-type: none"> <li>• Companies can overcome geographic barriers to reach a global customer-base</li> <li>• Provides an additional outlet for product and brand marketing</li> <li>• Provides an additional customer service outlet</li> </ul>	<ul style="list-style-type: none"> <li>• Building a brand on the web since traditional brand building models do not convert</li> <li>• Increased competition</li> <li>• Threats from start-up companies that move more quickly than larger traditional companies</li> <li>• Language and cultural differences across customer-base</li> </ul>
2. <i>Allows for customization of products</i>	<ul style="list-style-type: none"> <li>• Allows companies to offer all versioning combinations</li> <li>• Allows customers to personalize their product preferences</li> </ul>	<ul style="list-style-type: none"> <li>• Requires a direct channel between manufacturer and customer</li> <li>• Customers would need to be heavily-involved in the product</li> </ul>
3. <i>Allows for customer relationship management</i>	<ul style="list-style-type: none"> <li>• Allows for more personalized marketing rather than the many-to-many marketing campaigns used in broadcast media</li> <li>• Allows companies to collect data and develop profiles of their customers</li> <li>• Encourages an increase in customer involvement</li> <li>• Allows for a direct interaction to occur between companies and website visitors</li> </ul>	<ul style="list-style-type: none"> <li>• Consumers will be selective when determining with which companies they will develop a relationship</li> <li>• Companies are uncertain how to determine the cost-benefit of online marketing efforts</li> <li>• Consumer privacy issues arise</li> </ul>
<b><u>SUPPLY CHAIN OPPORTUNITIES</u></b>		
1. <i>Improves information sharing</i>	<ul style="list-style-type: none"> <li>• Encourages the sharing of more timely and more accurate information that could reduce ordering inefficiencies among channel members</li> </ul>	<ul style="list-style-type: none"> <li>• Developing relationships and mutual alliances among channel members</li> <li>• Sharing proprietary information with channel members</li> <li>• Shifting power among channel members</li> </ul>
2. <i>Allows the manufacturer to offer direct sales</i>	<ul style="list-style-type: none"> <li>• Overcomes some barriers that have prevented manufacturing companies from selling products directly to end-consumer</li> <li>• Allows manufacturer to sell products that traditional retailing outlets do not carry</li> </ul>	<ul style="list-style-type: none"> <li>• Requires the development of new strategies and merchandising skills</li> <li>• Existing business procedures may need adjusting (e.g., after-sales servicing)</li> <li>• After-purchase services in an online marketplace can be more complicated than in a traditional marketplace</li> <li>• Drawing consumers interested in purchasing product online (i.e., heavily-involved customers)</li> <li>• Conflict with existing channel members</li> </ul>
<b><u>INTER-ORGANIZATIONAL OPPORTUNITIES</u></b>		
1. <i>Reduces product development and ordering costs</i>	<ul style="list-style-type: none"> <li>• Automates or eliminates steps in the ordering process</li> <li>• Encourages internal and external collaborations resulting in faster product development</li> </ul>	<ul style="list-style-type: none"> <li>• Developing and maintaining the technology</li> </ul>
<b><u>WITHIN ORGANIZATION OPPORTUNITIES</u></b>		
1. <i>Enhances enterprise knowledge management</i>	<ul style="list-style-type: none"> <li>• Capture knowledge can enhance day-to-day operations and provide support during decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Properly storing and organizing knowledge bases</li> <li>• Retaining talented information technology employees</li> </ul>

## **Customer Management Opportunities**

Opportunities classified in this section enhance a company's relations with its customers. The use of Web technologies makes it easier to reach customers, to become knowledgeable about the individuality of customers, and to provide customers with products that best match their preferences.

### **Expands Businesses' Potential Reach to a Global Market**

In the traditional marketplace, geographic barriers limit the customer base of a business. Consequently, the group of potential consumers for manufacturers within the CPGI is limited to those customers within a reasonable distance from retailers carrying the manufacturers products. Furthermore, the reach of advertising efforts is also limited to viewers, listeners, and readers of specific media in which the manufacturer's products are marketed.

The Internet overcomes these limitations by allowing corporations the potential to reach a near-global market regardless of the consumer's location and accessibility to stores. The opportunity for near-limitless reach is significant, particularly for regional corporations that would otherwise not reach specific customers due to geographic limitations. Furthermore, the Internet provides members of the CPGI with an additional outlet for product and brand marketing, as well as an additional outlet to provide customer service. By taking advantage of these new opportunities, companies can increase the information services (e.g., product specifications, product selectors) that they provide to their consumers.

Since some companies of the CPGI have been established for over a century, they have had several years to experiment in developing and evaluating brand-building models in the traditional marketplace. Unfortunately, traditional brand-building models do not convert over to an online marketplace. Thus, building a brand on the Internet is a new experience for corporations within the CPGI.

A second challenge that traditional manufacturers must face is the threat of new competition. Since the reach of manufacturers expands in the online marketplace, traditional competitive advantages derived from location may no longer sustain. Not only are traditional competitors a growing threat, but also are venture-funded start-up companies that typically move ten times more quickly than large traditional companies (Lauf, 2001b) do in the online marketplace. Furthermore, the language and cultural differences among consumers across the expanded reach of the online marketplace require additional considerations in product developing and marketing efforts .

### **Allows for Customization of Products**

Traditionally, after a company markets a well-received product, its managers would determine the next version of the product that would add the most value to its market offerings (Lauf, 2001a). Although the CPGI is 50 to 100 years up the product versioning curve (Lauf, 2001b), the traditional brick-and-mortar marketplace does not allow all combinations of possible versions to be offered.

The Internet can overcome the physical space limitations of the traditional marketplace, by allowing companies the possibility to offer all versioning combinations. Thus, the Internet can provide the medium for corporations to offer these versioning combinations in a manner that is customized to the preferences of the specific buyer. This can be a significant opportunity for the CPGI industry, since it is not economical to provide the various combinations of most CPGI products through traditional channels.

The offering of personalized products would require a direct channel between the manufacturer and customers. As mentioned previously, not all products within the CPGI would be feasible candidates for direct sales and, thus, are not strong candidates for customization either. Additionally, customers who would desire personalized products purchased over the web would tend to be heavily involved in the product.

### **Allows for Customer Relationship Management**

The Internet changes the way businesses form relationships with its customers. In a traditional marketplace, it can be extremely difficult and expensive for a business to develop relationships with customers that will provide the business with valuable information about each customer's preferences. Not only that, marketing in the traditional marketplace is often impersonal, as popular broadcasting media only allows a many-to-many relationship between consumers and the company that sponsors the advertising (Lauf, 2001b).

The possibility for relationship-focused marketing provides several new opportunities for companies. By collecting data from website visitors, corporations can develop profiles of their customers. These profiles will provide corporations with a better understanding of who their customers are, while allowing corporations to personalize marketing efforts to the specific visitor based on the data in his/her profile. These personalized marketing efforts combined with the features offered on a website can result in a stronger relationship between a company and its customers. Features, such as interactive games, can encourage repeat visits to a website, while tools, such as product selectors, can increase customer satisfaction by better matching a customer's needs with the company's products.

Relationship management can also encourage an increase in customer involvement. Certain company and brand websites can be developed with the objective of building a sense of community among its visitors, which in turn encourage repeat website visits. Relationship management also allows for direct interaction between the company and customers. Direct interaction not only strengthens the relationship between the two entities, but it can also provide the company with costs savings for certain procedures. For example, direct interaction from a customer could be used to reduce product development time by allowing customers to provide immediate feedback for items in testing stages.

Unlike most broadcast media (e.g., television commercials, print advertisements), consumers will have a choice as to which companies he/she is willing to support a relationship with on the Internet. Although the relationship developed will be stronger than that arising from broadcast media, consumers will not support relationships with as many marketers as they see through

broadcast media (Lauf, 2001b). Thus, starting a relationship with consumers is a challenge that arises for CPGI companies using the Internet as an advertising tool. Additionally, many companies are uncertain as to how to determine the cost benefit of interactive marketing. For example, how would a company measure successful interactive marketing efforts? (Lauf, 2001b)

Furthermore, as companies develop stronger relationships with customers by discovering more information about the customers, maintaining consumer privacy may become an additional challenge that companies will need to address.

### **Supply Chain Opportunities**

Supply Chain Opportunities have an influence on a large number of players within the CPGI. The use of Web technologies can be used to improve the sharing of information among channel members in hopes of reducing inefficiencies. They can also be used to alter existing distribution channels.

#### **Improves Information Sharing**

Web technologies provide the medium for improving information sharing among channel members within the CPGI. In the past, information has not been fully shared among channel members within the CPGI, even with the aid of technologies, such as electronic data interchange, that encourage the sharing of information. When information, such as demand forecasts, are not fully shared among channel members, ordering inefficiencies can occur.

The Bullwhip Effect, which has been discussed in channel management literature, is the term coined for ordering inefficiencies. The Bullwhip Effect describes the occurrence of large variances in orders placed with suppliers compared to the actual variances of sales for the buyer. It occurs when demand information is distorted and amplified throughout the supply chain as the information moves upstream.

Four causes of the bullwhip effect have been identified: (a) demand signal processing occurs when channel members use past demand information to forecast future demands in a non-stationary market, (b) the rationing game occurs when business customers within the supply chain strategically order a quantity greater than what is needed to hedge for a predicted shortage within the industry, (c) order batching can cause a bullwhip effect particularly when fixed order costs are incurred when placing orders, and (d) price variations can cause a bullwhip effect when purchase prices are not constant (Lee et al. 1997). Several costs are associated with bullwhip orders: the unplanned purchases of supplies, additional manufacturing expenses due to excess capacity, inefficient utilization of human resources resulting in overtime, warehousing expenses, and inefficiently scheduled transportation costs. For example, more than a half of U.S. trucks are less than partially filled during transit (Krivda, 2001).

Companies can help avoid the bullwhip effect and its associated costs by sharing sales forecasts and information data with other channel members, by coordinating orders across the various retailers, and by simplifying pricing and promotional activities (Lee et al. 1997). Web technologies, such as B2B exchanges, encourage the sharing of timelier and more accurate

information resulting in reduced inefficiencies (Corbett et al. 1999). Landry (1998) suggests that pertinent information, such as sales goals and target costs, should flow freely among all members of the electronic channel.

The use of web technologies to encourage the sharing of information among supply chain members is not adopted without addressing new challenges. A primary challenge is the development of relationships among chain members (Landry, 1998). By building relationships among channel members, companies are further encouraged to operate closely and share information openly. However, companies may be hesitant to share their internal “proprietary” data with others. In fact, public exchanges initially planned “to have all the data visible to all participants, a feature that inspired fears of corporate espionage and competitive disadvantage (Kirva, 2001).” The sharing of information openly to outside organizations is difficult without first developing alliances. Thus, mutual dependencies in alliances should be encouraged (Landry, 1998).

Another impact of improved information sharing is a shift in power among players within the exchange. Businesses that have used their industry power to their corporate advantage might need to relinquish some power in order to develop the trust needed for these types of alliances. Landry (1998) suggests that power among supply chain members should be balanced. Balanced power among members of the exchange can help to increase trust by removing dominations by a few members within the industry.

### **Allows the Manufacturer to Offer Direct Sales**

Web technologies have changed traditional distribution channels for companies within the CPGI. For many decades, manufacturers have relied on traditional distribution channels (e.g., supplier → manufacturer → distributor → retailer → consumer) to get their products within the reach of consumers. Distributors and retailers assisted manufacturers by dispersing their products across a range of retailing outlets and locations, thus making their products more convenient for consumers to purchase. Without the value provided by the services of distributors and retailers, manufacturers would have to manage their own retailing outlets, which would require additional expenses (e.g., overhead and personnel).

The Internet and the World Wide Web have enabled companies to overcome some of the barriers that have previously discouraged manufacturing companies from selling their products directly to the end-consumer. By developing an online storefront as part of an Internet website, manufacturers can overcome the barriers of a traditional brick-and-mortar marketplace by reaching customers, regardless of their location, without the aid of distributors and retailers. Thus, online storefronts result in the development of a new distribution channel (i.e., supplier → manufacturer → consumers). By creating a distribution channel that does not include distributors and retailers, manufacturers can reduce the costs associated with getting their products to consumers by providing for themselves the value that was previously provided by those channel members.

Not only do web technologies offer manufacturers within the CPGI the opportunity to sell their products directly to consumers without using the services of distributors and retailers, but

also the Internet can be used as a medium for the manufacturer to sell products that few or no traditional retailing outlets are interested in carrying. Specifically, products that are in the late maturity stage of their product life cycle, although still in demand by some consumer groups, are key candidates for products that could be sold directly to consumers from the manufacturer through an online storefront.

The opportunity for a direct channel between manufacturers and consumers is not without its own challenges. First, a new business strategy would need to be developed and new procedures would need to be established if manufacturers were to sell their products directly to consumers. This would require manufacturers to not only fulfill the role of a producer but also the role of a merchandiser. Merchandising functions, which have long been the core competencies of retailers, would now need to be handled by the manufacturer. The manufacturer would need to develop a new set of skills to become competent in functions (e.g., customer service, knowing what and when to procure) that were previously handled through the retailer. Additionally, services that occur after the initial purchase of the item can be more complicated through an Internet channel. Product returns, for example, are complicated in an Internet channel. Unsatisfactory after-sales services can leave the customer frustrated. An additional challenge for manufacturers is the creation of policies and procedures that would help alleviate any added frustrations that might arise during the process of purchasing online or after the product has been ordered.

A second challenge results from the characteristics of the product itself and the profiles of the consumers who purchase them. Customers would need to be heavily involved in a product before purchasing it directly online (Lauf 2001a). Some products within the CPGI (i.e., cosmetics, hair care products) are more likely to have heavily involved customers than are other products within the industry (i.e., toilet paper, tissues). Identifying consumers who have the potential to be heavily involved with certain products becomes a new challenge for manufacturers pursuing a direct sales channel.

A third challenge that results from the changes to distribution channels brought about from the use of web technologies is the possibility for conflict across channels. The offering of direct sales by a manufacturer can result in conflict with traditional channel members. Companies within the CPGI have existing customers and distribution channels through which their business moves. Direct sales by the manufacturer to the consumer could damage existing relationships with traditional channel members (Lauf 2001b). Furthermore, the traditional distribution channel brings value to manufacturers, and it is uncertain if these values are valid in an Internet channel. It is necessary for manufacturers to keep their relationships with traditional channel members intact as Internet storefronts have not eliminated the need for traditional channels. Consumers want the convenience of retailers, particularly for consumer products and grocery items produced by CPGI manufacturers (Lauf 2001a). Without a retailing outlet, consumers would need to visit numerous manufacturers' websites to purchase needed items. Additionally, retailers benefit manufacturers by providing them with an outlet to advertise on a local level through the use of store flyers and displays.

## **Inter-Organizational Opportunities**

Opportunities that impact the business processes between a company and one of its partners are classified as Inter-Organizational Opportunities. Specifically, web technologies assist companies and their partners in reducing ordering costs and reducing product development time through collaboration.

### **Reduces Product Development and Ordering Costs**

Web technologies provide the medium for reducing product development and ordering costs for members of the CPGI. Inconsistent purchasing practices have cost manufacturers nearly \$900 billion annually in procurement expenses (Krivda, 2001). Additionally, warehouses have carried over \$1 trillion in “just-in-case” inventory, as forecasting technology has shown to be inefficient (Krivda, 2001).

In addition to reducing costs associated with unexpected Bullwhip orders, web technologies can streamline the costs associated with the ordering process. By automating or eliminating steps in existing processes, reductions in ordering costs can be realized.

To further reduce costs, web technologies could be used as a decision-making tool that not only reduces product development costs internally for the organization, but also allows the manufacturer to coordinate decision-making among channel members to encourage faster product development and innovations through collaborations (Landry 1998).

Unfortunately, it can be difficult for many companies to develop and maintain these information systems and technologies. Many Fortune 50 firms can no longer afford to develop major information systems on their own (Lauf, 2001b). Determining whether to outsource any functions that are currently internally-operated becomes an issue for those trying to reduce the costs associated with these technologies.

## **Within Organization Opportunities**

Within Organization Opportunities affect the company’s internal processes. Not only can Web technologies be used to enhance collaboration among departments and employees, they can be used to enhance the management of enterprise knowledge.

### **Enhances Enterprise Knowledge Management**

Although traditional assets (e.g., factories, equipment) once were the source of wealth creation for businesses, intellectual property has become the source of wealth creation in today’s economy (Lauf 2001b). Intellectual property, such as knowledge bases, can benefit the entire company if it is properly stored, organized, and utilized (Turban, 1998). By capturing expertise from within the organization and providing that knowledge as information that can be used by any employees, businesses can enhance their day-to-day operations or provide added support during decision-making.

Intelligent agents and web technologies are facilitating the use and maintenance of knowledge bases (Turban, 1998). Because of the technical specialization required for enterprise knowledge management, it can be difficult for companies to hire and retaining talented information technology and knowledge workers. The demand for these highly skilled employees will continue to grow with existing and future commerce initiatives.

## **P&G's Web Initiatives**

The initiatives that P&G has undertaken take advantage of many of the web opportunities available to the CPGI. Table 4 displays which initiatives are capitalizing on each opportunity.

***Table 4: A Comparison of Web Opportunities and P&G's Initiatives***

<b><i>OPPORTUNITIES</i></b>	<b><i>P&amp;G INITIATIVES</i></b>
<b><i><u>CUSTOMER MANAGEMENT OPPORTUNITIES</u></i></b>	
<b><i>1. Expands businesses' potential reach to a global market</i></b>	<ul style="list-style-type: none"> <li>• Reflect.com</li> <li>• MoreThanACard</li> <li>• PG.com, Brand Websites, and Online Communities</li> </ul>
<b><i>2. Allows for customization of products</i></b>	<ul style="list-style-type: none"> <li>• Reflect.com</li> <li>• MoreThanACard</li> </ul>
<b><i>3. Allows for customer relationship management</i></b>	<ul style="list-style-type: none"> <li>• Reflect.com</li> <li>• MoreThanACard</li> <li>• PG.com, Brand Websites, and Online Communities</li> </ul>
<b><i><u>SUPPLY CHAIN OPPORTUNITIES</u></i></b>	
<b><i>1. Improves information sharing</i></b>	<ul style="list-style-type: none"> <li>• Supply Chain Information Collection Initiatives</li> <li>• Transora</li> </ul>
<b><i>2. Allows the manufacturer to offer direct sales</i></b>	<ul style="list-style-type: none"> <li>• Reflect.com</li> <li>• MoreThanACard</li> <li>• PG.com, Brand Websites, and Online Communities</li> </ul>
<b><i><u>INTER-ORGANIZATIONAL OPPORTUNITIES</u></i></b>	
<b><i>1. Reduces product development and ordering costs</i></b>	<ul style="list-style-type: none"> <li>• PG.com, Brand Websites, and Online Communities</li> <li>• Supply Chain Information Collection Initiatives</li> <li>• Transora</li> <li>• Yet2.com</li> <li>• Innovation Net</li> </ul>
<b><i><u>WITHIN ORGANIZATION OPPORTUNITIES</u></i></b>	
<b><i>1. Enhances enterprise knowledge management</i></b>	<ul style="list-style-type: none"> <li>• Supply Chain Information Collection Initiatives</li> <li>• Yet2.com</li> <li>• Innovation Net</li> </ul>

*Customer Management Opportunities:* Three of the P&G initiatives presented here take advantage of the customer management opportunities arising from the web. Reflect.com, MoreThanACard, and PG.com/brand websites have expanded P&G's potential reach to a global market through the development of a web presence. These initiatives have also allowed P&G to enhance its customer relationship management efforts. However, these initiatives are not realized without involving technical, economical, and organizational issues.

As with past innovations, P&G has been in the forefront of companies within the industry that are capitalizing on these customer management opportunities, with several initiatives being well received by consumers. For example, it can be a challenge for companies to build a brand on the web since traditional brand-building models do not work. A few months after the June 2000 launch, the struggling MoreThanACard website was shutdown so a new site design could be created. Reflect.com, however, experienced a successful launch and has continued to attract the attention of women. Since its debut, Reflect.com has fulfilled over one million customized orders (Reflect.com Press Release, 2001). Establishing a complementary mix of marketing approaches, including both Internet advertising and traditional advertising media, can assist a company to build a brand on the web.

Another challenge for P&G has been in developing a reason for consumers to return to a website. Although, P&G has initiated several features on their website to encourage return visits, the company currently doesn't have enough knowledge in interactive marketing to know what is successful and what is not successful (Lauf, 2001b), as past measures of interactive marketing success (i.e., hit-throughs) are not reliable indicators. In addition to providing several features on their website to encourage return visits, P&G has offered special promotions to encourage repeat sales. With hopes of drawing highly involved cosmetic users to its site, Reflect.com has offered incentives to past customers to encourage repeat purchases and referrals. Promotions and loyalty incentives have included a free Palm Pilot with a purchase of \$100 worth of cosmetics and free customized mascara for a friend.

Additionally, it is important for P&G to decide whether it should be responsible for editorializing the content of its websites, including bulletin boards, chat rooms, and other online community features (Lauf 2001). In the past, P&G has faced public pressures to close chat rooms of a website after receiving complaints that it did not curtail sexually explicit conversations (*Marketing Week* 2000).

P&G has had to develop partnership with other organizations that can fulfill competencies that P&G is lacking to reap from these opportunities. For example, P&G has partnered with Excite.com, to bring technical expertise to websites (*Marketing Week* 2000). "The difficulties that P&G is facing on the web reflect both the company's struggle to connect with consumers in the 21<sup>st</sup> century and investors' new realism about the value of the Internet (*Marketing Week* 2000)."

*Supply Chain Opportunities:* Several of P&G initiatives have benefited from the web opportunities that can enhance the supply chain. A few of these initiatives have improved the efficiency and timeliness of supply chain data, while other initiatives have altered the composition of the supply chain through the sale of products directly from P&G to the consumer.

The flow of information among supply chain members has improved with these new web initiatives. Transora has already launched eProcurement, data catalog, logistics optimization services and collaborative planning, forecasting and replenishment services (Krivda, 2001) that are benefiting participants. P&G's supply chain information collection initiatives have enhanced the capture and analysis of point-of-sale data that will further improve company processes. Additionally, However, consumer privacy may become an issue in regards to these initiatives, particularly the smart packaging initiative. The capture of detailed consumer data could cause concern among consumers and privacy advocate groups. It will be important for P&G to have a plan to address these issues as these initiatives develop further.

The development of the direct-to-consumer channel has resulted in a few issues for P&G. It is important for P&G to inform traditional retailers of its intentions with direct sales from the PG.com and brand websites. P&G has had to assure retailers that their intention with Reflect.com is not to compete with Food, Drug and Mass Merchandising outlets. According to research conducted by P&G, there is a need for distributors and retailers within this industry (Lauf 2001a). Findings suggest that consumers want an aggregator for consumer product goods because of the convenience that they provide. (Ironically, Food, Drug and Mass Merchandising outlets frequently sell their own private label consumer product goods that directly compete with P&G products.) Furthermore, the sale of beta products on PG.com direct sales are not intended to be a substitute to traditional channels of product distribution. Rather, these strategies are used to develop an interest in new products before they reach retailers (i.e., word-of-mouth referrals).

P&G has also faced the issue of whether it should continue to offer the direct purchase of MoreThanACard packages or if they should partner with retailers to offer the products in their stores. P&G has been working with retailers interested in carrying the care packages in their stores (e.g., Target).

*Inter-Organizational Opportunities:* Several of P&G's web initiatives have taken advantage of the inter-organizational opportunities provided by the Internet. These opportunities improve upon existing relations with other organizations. The reduction of product development costs and ordering costs have been realized through the implementation and use of these projects. *For example, Yet2.com has allowed P&G to reduce product development time by providing P&G with the resources to identify and potentially purchase patented objects from other industries. P&G could also capitalize on their own patented assets by selling rights to the patents to other companies.*

*Within Organization Opportunities:* P&G has used the web to implement initiatives that benefit the entire organization. These initiatives enhance enterprise knowledge management and encourage collaboration among employees who would otherwise not be coordinating efforts. InnovationNet has improved employees' accessibility to corporate and other relevant information through the use of a website that displays and categorizes links to all available material. InnovationNet also encourages employees to seek advice and input from other P&G employees. This feature has increased collaboration across departments and brands, which has resulted in improvements in product development time. Supply chain information collection initiatives have

also assisted in the sharing of knowledge across departments by improving the access to and accuracy of market data.

### **Do P&G's E-Commerce Initiatives Capture the Uniqueness of the CPG Industry?**

When analyzing P&G's existing e-commerce initiatives it is apparent that they have considered the uniqueness of the industry. The following identifies how P&G has taken advantage of the unique characteristics of the industry (identified in Section III) through their initiatives.

***Reflect.com:*** Reflect.com changes cosmetics from being just a mundane, everyday product to an exciting product by allowing the consumer to create her own product. This process can also increase a person's emotional attachment to a product, which can help increase brand loyalty and assist P&G in differentiating this brand from competing brands. Reflect.com also fulfills the need for new distribution channels to reach consumers by allowing consumers to purchase the product directly from the manufacturer.

***MoreThanACard:*** MoreThanACard also changes mundane, everyday products across various P&G brand lines into gift packages that add emotional value to the products. It can also help develop brand loyalty by familiarizing consumers who are new users of certain product lines (e.g., new parents, new homeowners) with products that they may need to repurchase regularly in the near future.

***PG.com, Brand Websites, and Online Communities:*** These websites attempt to add value to existing products through the contents of the websites (e.g., suggestions for alternative uses). Product selectors on websites assist consumers in differentiating products within a single brand. Direct interaction with consumers can improve product offerings and reduce the time needed to get a new product to the marketplace. Being the first company to bring a new product to the marketplace is considered to be a significant advantage in this industry (*Standard & Poor's*, 2000).

***Supply Chain Information Collection Initiatives:*** These initiatives improve upon the low profit margin that is realized on products sold within the industry. It also can increase sales by capturing the sales that were previously lost due to inventory shortages.

***Transora:*** Transora also improves upon the low profit margin that is realized on CPGI products by reducing the costs that are absorbed during production. In fact, Transora has the potential to generate more profit than initiatives that attempt to increase sales by streamlining production costs.

***Yet2.Com:*** This initiative improves the time and the costs needed for product introductions by reducing some of the R&D expenditures needed for product development. Furthermore, it improves the profit of the company by capitalizing on past expenditures by selling rights to existing patents. The sell of these patents can also improve P&G's bottom line during the current period of low expected sales growth for the industry.

**InnovationNet:** Innovation net is another initiative that improves the time required to get a new product to market by encouraging collaboration among employees across the company.

## REFERENCES

- “Procter & Gamble Weds Data, Sales,” *Advertising Age*, October 23 2000, p.76+.
- “Case Study: P&G Gathers Web Strength,” *BtoB*, November 6, 2001, p. 1.
- “A Swifter Path to Market,” *Business Week*, Spetember 18, 2000.
- “Procter & Gamble Joins LabSeek’s B2B E-marketplace,” *Business Wire*, October 4, 2000.
- “Procter & Gamble Realizes Sizable Savings in Energy Costs Using Energy Gateway.com,” *Business Wire*, November 21, 2000.
- Cleary, J. Michael. “Cutting Breakthrough in Interactive Marketing by Putting the Consumer First.” *Ad-Tech Conference*, Amsterdam, June 3, 1999.
- Cohen, M. A., and Whang, S. “Competing in Product & Service: A Product Life-Cycle Model,” *Management Science* (43:4), April 1997, pp. 535-545.
- Corbett, C. J., Blackburn, J. D., and Van Wassenhove, L. N. “Case Study Partnerships to Improve Supply Chains,” *Sloan Management Review*, Summer 1999, p. 71-82.
- Datar, S., Jordan, C., Kekre, S., Rajir, S., and Srinivassan, K. “New Product Development Structures and Time-to-Market,” *Management Science* (43:4), April 1997, pp. 452-464.
- “Procter & Gamble: Big Brands, Big Markets,” *European Cosmetic Markets*, December 2000, p. 473+.
- “The Complete Package – With the Novelty of the Internet Worn Off, Online Shoppers Will Expect a Lot More Than Web Sites and Timely Delivery this Holiday Season.” *Information Week*, Oct. 16, 2000, p. RB4.
- “Procter & Gamble Jump Starts Corporate Change,” *Internet Week*, November 1, 1999, p30.
- Krivda, Cheryl D. “Transora’s Sprieser is Reshaping an Enormous CPG Industry,” *ARIBA Magazine*, Summer 2001, pp. 19-25.
- Landry, J. T. “Supply Chain Management: The Case for Alliances,” *Harvard Business Review*, November-December 1998, pp. 24-25.
- Lauf, R. I., Venture Manager for Procter and Gamble. *Personal Interview*, January 26, 2001, Urbana, Illinois.

Lauf, R. I., Venture Manager for Procter and Gamble. *Presentation*, March 26, 2001, Urbana, Illinois.

Lee, H. L., Padmanabhan, V., and Whang, S. "Information Distortion in a Supply Chain: The Bullwhip Effect," *Management Science* (43:4), April 1997, p. 546-558.

"Why Soap Sites are a Bit of a Wash-out," *Marketing Week*, November 23, 2000, p. 23.

"Transora Showcases Results from Pilot Auctions; Plans to Roll out Services by End of the Year," *PR Newswire*, November 15, 2000.

"A.G. Lafley Spells Out P&G's Equation for Success," *Procter & Gamble Press Release*, Oct. 10, 2000.

"Growing Demands for Customized Products Leads Reflect.com to Build Larger Facilities," *Procter & Gamble Press Release*, April 17, 2001.

"Microsoft and Procter & Gamble Team to Create Tools for Real-Time Supply Chain," *Procter & Gamble Press Release*, June 26, 2001.

"P&G Bolts to Teens," *Promo*, Oct. 200, p. 51+.

"Consumer Giant Employs E-commerce to Lower Costs," *Purchasing*, December 22, 2000, p. 588.

*Standard & Poor's Industrial Surveys: Household Nondurables*. (168:36), September 7, 2000.

Turban, Efraim & Aronson, Jay E. (1998) *Decision Support Systems and Intelligent Systems*, 5<sup>th</sup> Edition. Prentice-Hall Inc., Upper Saddle River, NJ 07488.

"Argentina: Procter & Gamble Sells via Web," *South American Business Information*, November 28, 2000.

VanScoy, K. "Can the Internet Hot-Wire Procter and Gamble?" *Smart Business*, December 14, 2000.