

RFID and Consumer Demand

By tagging people who agree to allow their shopping habits to be tracked anonymously, retailers could gain unparalleled insights into consumer behavior.

Companies around the world are examining RFID technology's potential to sharply increase efficiencies in procurement, production and distribution, enabling them to put better products into consumer hands more quickly. But which consumers' hands? That's a problem still solved the old fashioned way: by analyzing store-level sales and conducting consumer market research. With all the RFID attention focused on supply-side applications at Metro, Target, Tesco, Wal-Mart and other major retailers, the potential for RFID to dramatically alter the way consumer demand is anticipated and managed is being overlooked.

The RFID industry isn't ignorant of this potential, only stymied by it. With consumer groups, such as [Consumers Against Supermarket Privacy Invasion and Numbering](#), lobbying to prevent creative uses of RFID to track consumer products, retailers and manufacturers have tried to reassure the public and lawmakers that tagging will only be used to track product dissemination, not consumption.

How, then, will RFID ever enable true consumer demand management? The answer lies not in secretly tagging products, but in openly tagging consumers. Yes, tagging people is more difficult than tagging products, but it will actually be more efficient in the long run if you start with one radical step: get consumers' permission.

We're in a stage today where the Internet was 10 years ago, when a company named Media Metrix realized that software could track a consumer's Internet behavior continuously. Of such little concern is this benign form of research that every day more than 50 million Internet users worldwide are being tracked—with permission—for commercial purposes. Nielsen NetRatings, a Media Metrix competitor, will sell nearly \$50 million worth of that anonymous data this year. Internet monitoring teaches us that consumers will allow tracking as long as the following requirements are met:

Consumers benefit from it. Consumers want to get something in exchange for what they give. Media Metrix pays its online panelists for the right to track their behavior and periodically survey them. Some Internet service providers collect surfing data from their customers as part of their free or low-rate ISP services.

It is unobtrusive. Even if you offer to pay consumers, they won't allow you to track their behavior for long if it requires a lot of work. IRI, which gives consumers equipment to use in their home and pays consumers in the United States to scan each bar code on the products they buy at the supermarket and bring home, has to constantly recruit new panelists to replace ones who grow tired of the process.

Their privacy is guaranteed. Consumers expect a bona-fide privacy policy that clearly states the limits of the information collected and the protections that will be placed on the data.

RFID tracking, the least intrusive direct measurement technology ever invented, can honor all of these requirements and make true consumer demand management possible. The first step is to demonstrate that this can work on a small scale and then move up. The ingredients for a successful small-scale trial are:

1. A representative group of consumers willing to carry RFID tags
2. An infrastructure for reading RFID tags
3. A system for analyzing and disseminating the data collected so firms can adjust marketing and distribution decisions accordingly.

Enter Singapore. This tiny Southeast Asian nation is the perfect test bed for a consumer demand management implementation. The high computer literacy of the population will likely translate into consumer willingness to participate. The country's relatively compact size and existing high-speed network capacity makes the installation of a sufficiently comprehensive infrastructure cost effective. Singapore's government has a long-demonstrated commitment to pushing industries in its boundaries to pursue new technologies generally and RFID specifically, setting aside S\$10 million (US\$5.8 million) over the next three years to promote adoption of RFID technology in the country.

The test could be designed somewhat like this. As many as a million people agree to carry RFID tags that transmit a unique ID code to readers installed in key places, such as supermarket aisles, shoe departments, even public thoroughfares. These readers would pick up and store the ID code along with the time and duration of stay. This information would then be relayed across the Internet and stored in a secure database of basic demographic and psychographic information collected when consumers first registered. The individual consumers would not be identified, and their names would not be associated with their shopping habits. The reports and analysis of the data could then be published on the Web.

What are the benefits of such a system? It's all about location. As a retailer, you could spend millions of dollars per year trying to attract people to your stores. Thousands walk by your locations each day, but only a few walk in. Of those who walk in, as many as two-thirds will walk out without making a purchase. Who are those people you spent millions to influence and failed to lure into your store? You want to know what they're like, where they shop, how much income they have. You would love to know if they eventually came back, or better yet, if they went to a competitor's store. All of this information would be available in daily, even hourly, reports.

A public system that provides this information would benefit all players in the economy, leveling the information playing field and creating a more competitive—and more efficient—retail environment. Moreover, retailers could, with the strategic installation of a few readers in stores, gather data that would enable them to analyze traffic patterns in their aisles to identify more effective retail layouts and find cross promotion opportunities.

If a test such as this were to happen, whether in Singapore, Finland or the Netherlands where RFID smart cards have recently been approved for public transportation payments, it would be the first step in creating consumer demand management systems worldwide. It would fill the direct need a market economy has for perfect information, a level of information that has only existed in theory before now and that once demonstrated would become a necessity in every market. Only at that time, when RFID and the technologies it will spawn are making supply and demand curves both maximally efficient, will the economic prosperity promised by an electronic society be found.

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