There and
back again

How the parcel and courier services industry can transform the supply chain and customer experience with RFID technology

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For years, logistics and supply chain management have become leading topics among organizations searching for ways to both predict and optimize their costs of business. As the challenges of the global economy take a drastic toll on these companies, improving operational performance and efficiency has become a top-level priority.

Over the recent months, many companies have bought-into the benefits posed by radio-frequency identification. This technology has existed for years and has grown in acceptance by retail, supply chain and government organizations. Companies including Wal-Mart, Benetton, Gillette and Gap have announced the utilization of smart tags to address supply chain areas ranging from manufacturing to inventory control.

Research leaders predict that safety measures will also prove to be beneficiaries of these RFID efforts. However, some visionaries see it forging a closer affiliation between companies and the valuable consumers they interact with. But, how can this be achieved? One way is by incorporating RFID technology into the warranty, lost-and-found returns process and reverse logistics facets of product ownership. By aligning new service offerings in collaboration with players in the parcel shipping industry, superior customer service can become an important competitive advantage.

RFID and reverse logistics

Some industry experts believe that warranty and return logistics solutions will represent killer applications for RFID, providing value to companies and their customers. Leading parcel and courier players like FedEx, UPS and the United States Postal Service (USPS) have been exploring the benefits of artificial intelligence-like applications for improving their services and those offered by their corporate customers.

One example is the UPS Supply Chain division. This group offers a completely integrated approach to the post-sales support cycle. Their dominance in the global marketplace allows companies to reduce their post-sales service costs while offering better customer support on a worldwide basis.

Another player in this arena is the United States Postal Service. The USPS has continuously been searching for new customer service offerings to enhance revenues and improve their operations. Recently, as part of the President's Commission on this

organization, committee members began investigating the potential of "intelligent mail" with Pitney Bowes. According to the company, the basic concept is that each piece of mail can be uniquely identified and traced from creation to final delivery and upon return, if applicable. According to a report issued to the Commission titled 'The Power of Intelligent Mail': "in the future, RFID will complement the bar code as a method of producing information-rich mail, and will spawn its own set of inventions to make the movement of information, documents, and packages even more of a driver of positive political, economic, and social change." Well, the future is now and early adopters are embracing it.

RFID applications that provide value

Both large enterprise companies and entrepreneurial start-up organizations are crafting solutions that incorporate RFID technology to allow companies to expand customer service offerings that reinforce business objectives.

Intellareturn – a patented, New York-based early stage company – provides RFID smart label applications that leverage product registration, return shipping and warranty service touch-points aimed at optimizing the current supplier and customer relationship technologies of existing SCM, ERP and CRM solutions. The company's Smart Return Service easily integrates with all existing legacy shipping solutions, such as the Fedex Net Return API, as a technology-agnostic approach to enhancing customer support infrastructure. But how would it work? A customer would go online to register a product and enter personal

information, activating the Intellareturn process. If the product was lost, it could be identified by its tag (the RFID-based Return ID Stamp) and returned via one of the major parcel carriers. If the product needed to be repaired, the customer could go online, enter information at the company's website and a parcel service would pick it up. The consumer wouldn't even need to fill out a shipping label, making the service simple and user-friendly. When the driver arrives, he scans the tag and uses the ID number to retrieve all the information he needs from the Intellareturn Smart Return Service database. Intellareturn's Return ID Stamps are supported by a system built on the existing operational infrastructure of express parcel carrier and airline transportation networks to create a global, real-time product registration, payment, tracking and product return solution.

By implementing such a system, companies can offer additional services that customers may be willing to pay for and parcel companies would generate extra business from handling the returns. Companies could also build customer loyalty by improving the

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return experience and streamline the return process making it more cost-efficient.

Return-on-investment and benefits

Advances in miniaturized electronics, nanotechnology and ongoing research at the MIT Auto-ID Center are developing intelligent ID devices into highly sophisticated smart labels for applications in reverse logistics and post-sales warranty support. The benefits are far more than just product tracking capabilities. The value proposition stems from new services that organizations can offer, wrapped around their actual products. It's a quantum leap in the relationship with customers, not just a better barcode. While barcodes are and will continue to be an industry standard for some time, they are a "line-of-sight" technology. RFID tags, on the other hand, do not need to be "seen" by the reader, enabling solutions that are faster, more accurate and more cost effective with respect to barcode and magnetic stripe technology. Airline baggage tagging is one field where RFID could be beneficially applied; lost and delayed baggage - always high on the list of passenger gripes in consumer surveys – could be significantly reduced using RFID baggage tags.

With consumer returns reaching past the six percent mark for all retailers, a high-quality reverse logistics program becomes important for a company's success. Essentially, any location that now uses barcodes in their return solution can achieve new benefits from RFID solutions.
For many companies, the area of reverse logistics has essentially been

dismissed from their supply chain and budgetary planning process. As a result, many organizations are still using inefficient systems to handle returned goods. Credit for returned items is slow to being applied and status updates are virtually unavailable, resulting in poor customer satisfaction. RFID can arm these customers with complete data and automation processes to manage their return shipments more efficiently. More efficient handling of returns becomes especially important with the increasing popularity of e-commerce. In order to keep these high return rates from eroding already thin profit margins, businesses are being driven to re-think their reverse logistics process.

Proof by example

In a recent report conducted by IBM Consulting Services for the Auto ID Center, some rather interesting findings were uncovered. A Rogers and Tibben-Lembke study analyzed the major problems for returns management in the consumer-based computer and electronics industry. The result: the costs of reverse logistics negatively impact profits by as much as 25%.

Utilizing RFID-based solutions can reduce or eliminate many of the inefficiencies associated with reverse logistics, supporting customer relationships with after-sales applications like warranty and return efforts. For example, an electronics company like Sony or Nikon could embed an RFID tag within their

Flow diagram of an RFID smart label application designed to optimize the customer relationship management technologies of existing SCM, ERP and CRM solutions

products. If a customer agrees to buy an extended warranty, the manufacturer could offer to automatically pick up the product if it needs to be serviced or have it returned for free if it is lost or stolen.

According to the August 2001 edition of 'PointSec', 2,900 laptops, 1,300 PDAs and 62,000 cell phones were left in London taxicabs in the first 6 months of 2001. A mere 5% of these items were ever returned to their owners due to lack of identification and a convenient return process. Incorporating the RFID logistics solution, many more of these possessions could have found their way home.

A winning solution

The Internet revolution was about people connecting with people. The next revolution will be about things connecting with other things, based upon tiny electronic tags enabling the tracking and identification of each individual item. In the field of return logistics, incorporating RFID solutions that give every item in the real world a digital counterpart is a win-win-win situation. Consumers receive better services from the companies they deal with, leading to enhanced revenues, improvements in operational efficiencies and customer loyalty. Parcel and courier players open new revenue streams as well, since corporate customers can take advantage of RFID technologies through the existing infrastructure of these organizations. The benefit is a symbiotic relationship that produces results.