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The Difference between Fast Follower and High Performance Leader: RFID in Canadian Business

A four-letter technology is about to spell big changes for Canadian retailers, manufacturers, distributors and wholesalers. After decades of quiet evolution, RFID – short for radio frequency identification technology – is creating a buzz in the retail and manufacturing marketplace, thanks in large part to such organizations as Walmart, Marks & Spencer, the U.S. Department of Defence and large pharmaceutical firms, which have adopted the technology and require that their suppliers follow suit. At the same time, the cost of RFID systems has decreased and continues to do so, while the technology itself continues to improve.

While most of the suppliers affected by these recent RFID installations are in the United States and Europe, a number of Canadian companies are also facing compliance deadlines. But beyond the need to meet their customers' shipping requirements, Canadian organizations need to look at RFID as an inevitable technology that will prevail across industries within the next few years, and as an opportunity to improve efficiencies, create a competitive advantage and strive to become a high performance organization.

The question is: should they act now or wait and see when and how other players in their industry will apply this maturing technology?

To answer this question, Canadian companies need to gain a profound understanding of RFID technology, its potential applications, and how it can impact them, their customers and suppliers, and their industry.

How it Works

RFID is a system that uses radio signals to automatically collect and transmit information. A basic RFID system is comprised of:

- An antenna or coil
- A transceiver (also referred to as a reader)
- A transponder (also referred to as a tag)

Unlike bar codes, which need to be scanned from the start of the bar code right through to the end and therefore need to actually be "seen" up close by a scanner, RFID tags can be read from a distance and through most boxes, walls or doors. RFID systems can also read multiple tags simultaneously, and work well through snow, fog, ice, paint and crusted grime. In most

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cases the read time in an RFID system is less than 100 milliseconds, enabling faster movement through the supply chain.

The Applications and Possibilities

RFID can be implemented internally or as a customer-facing application. Think of it in a manufacturing application where tags on raw material, combined with sensors that gauge such factors as humidity and temperature, transmit information that can then be used to route the material appropriately through the manufacturing process.

In warehouse and shipping operations, RFID can determine the exact location and quantity of products at any given time. Imagine being able to call an inventory right from your desktop, without having to dispatch an army of people to count or scan the products on your shelves. And with RFID keeping track of the goods, companies can reduce thefts and manage their assets more effectively.

On the consumer level, RFID can help enhance customer loyalty by allowing companies to deliver better or value-added services. Potentially, RFID tags on retail products could eliminate line-ups at the checkout counter and errors in sales processing. Customers simply take what they need and walk away. As they leave the store, readers automatically tally up their purchases and charge the total to their credit cards. Putting RFID tags on all in-store items would also allow retailers to ensure their shelves are always stocked without building up a large inventory. And because RFID technology would enable retailers to track the movement of their goods within the store in real-time, they could offer on-the-spot discounts or promotions even as customers are picking items off the shelves and placing them in their grocery carts.

The Business Case

For companies implementing RFID systems as a matter of compliance, the business case for the technology may seem open-and-shut: do it or lose the business. In fact, developing a business case for RFID should go beyond the costs of not complying and examine how else the technology can benefit and create a high performance organization.

If, for example, you are a company that handles hazardous materials, can using RFID to track hazardous goods speed up your work process, reduce accidents and lower your insurance costs? How would these benefits stack up against the costs of implementing an RFID system and how long would it take for you to get a return on your investment? Similarly, a distributor could look at the potential business benefits of using RFID to manage its warehouse and transport fleet more efficiently.

Whether or not they're under pressure to comply with an RFID requirement, Canadian companies need to familiarize themselves with RFID and start thinking of how this up-and-coming technology can add value to their organization. As a starting point, they should sit down and generate ideas on how RFID can help them develop a competitive advantage. Once they've identified which work processes would yield the greatest value from the addition of an

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RFID system, the next step would be to determine the level of investment required to achieve this value. This would require an assessment of existing IT infrastructure, ERP process logic and product information.

In developing a business case and implementation strategy for RFIDs, companies should adopt an incremental approach that calls for limited prototype or pilot programs in high-value areas. Through this process of small-scale testing and re-testing, companies can identify and substantiate the benefits of RFID before launching broader-scale applications.

The Challenges

Although the technology has come of age, the RFID industry itself is still immature and fragmented, with no single company capable of supplying all the components of an RFID system. Recognizing this void in the market, Accenture has stepped in as an RFID strategist and systems integrator. Backed by a decade of RFID research and a comprehensive network of vendors, Accenture helps companies develop their business case for RFID, build the system, and launch pilot programs and full-out implementation.

The fragmented RFID market has also resulted in the absence of an RFID standard. But now that some of the biggest retailers in the world have embraced RFID, a standard is likely to emerge over 2004, paving the way for widespread adoption of the technology.

Because RFID can potentially be used to track individual consumer behaviour, the question of privacy is also one that companies will need to address at some point. It will take a few years before RFID is adopted below the supply-chain level, so building privacy policies around this technology is, at present, premature and unnecessary.

Nevertheless, Canadian companies may want to look ahead at the privacy implications of RFID and proactively determine how they will shape their privacy policies once RFID tags are applied to individual items.

Perhaps the biggest challenge companies face in implementing RFID is how successfully they can re-engineer their business processes – from data integration and storing, to moving and analyzing the new real-time data streams – to fully realize the potential of the technology. As remarkable as it is, ultimately RFID is just one component in a collage of business processes; unless these processes are changed, companies cannot effectively harness the value of RFID.

The Outlook in Canada

Most companies implementing RFID in the next year will likely do so at the pallet level. As the technology advances further and the cost per tag comes down, RFID tags will start to appear on cases of goods. Eventually, most items will be tagged individually.

RFID is here, and the impact of its arrival will soon be felt across all industries. Those high performance organizations that take proactive steps in assessing RFID's potential for honing

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their competitive edge will avoid the panic that is sure to hit as more organizations make RFID compliance a prerequisite for doing business.

Those Canadian organizations who choose to "wait and see" do so at the risk of finding themselves in a last-minute scramble to implement a technology that is untested against their work processes. Not only will they miss out on the full potential of RFID, they could lose out to high performance competitors who had the foresight to learn about this innovative technology in the early stages of mainstream adoption. Winning companies are riding ahead of competition by implementing the technology now.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Committed to delivering innovation, Accenture collaborates with its clients to help them become high-performance businesses and governments. With deep industry and business process expertise, broad global resources and a proven track record, Accenture can mobilize the right people, skills, and technologies to help clients improve their performance. With approximately 86,000 people in 48 countries, the company generated net revenues of US$11.8 billion for the fiscal year ended Aug. 31, 2003. Its Canadian home page is www.accenture.ca.

For more information on RFID please visit www.accenture.com/silentcommerce