

China faces barriers in RFID adoption

December 22 2005

Wal-Mart may be trying hard to convince its leading suppliers to use Radio Frequency Identification (RFID) tagging on shipments, but pushing this technology's introduction to the Chinese manufacturers that ship between 50 percent and 70 percent of non-food products to this largest U.S. retailer may prove to be tough.

A recent study by Fusion Consulting has revealed that even as RFID technology has had a huge impact on manufacturing, distribution and retail globally, lack of information and the fact that companies in South China "don't understand and are not familiar" with the technology is posing a "key barrier" to adoption of RFID in the Pearl River delta region.

RFID tags, designed as the next step from barcodes, are as the name suggests radio frequency wireless tags that allow retailers and suppliers to keep track of their products and control inventories more efficiently.

In America, retailers have created compelling business cases for deploying RFID in their supply chains, from reducing out-of-stocks at Wal-Mart to upselling shoppers in Prada. The technology reduces labor costs by automating the process of tracking goods.

"Fusion surveyed 136 international and local manufacturers, buying offices and logistics service providers located in Guangdong and Hong Kong," said the report, "94 percent of which indicated that they are currently not interested in adopting RFID technology for tracking their merchandise."

Fusion, which operates out of Shanghai, Hong Kong and Singapore, added that of the 93 companies that had clear reasons for not adopting RFID, the main obstacle is ignorance: 44 percent said that they either did not "understand and/or were not familiar" with RFID.

However, according to Steven H.T. Wong of China Elite Technology and a member of the advisory board to EPCglobal Hong Kong, the adoption of RFID remains unsatisfactory not only in South China-based companies but also in companies through out the Middle Kingdom.

One reason, he says, is that Chinese companies have not found a good reason to invest in the technology. That's because unlike in America, where RFID tagging has helped in reducing labor costs by automating the process of tracking goods, labor in China is cheap and widespread.

"Contract manufacturers (there) utilize low-tech, mass-production techniques," Wong said. "With their big-brand customers squeezing them for profits, the manufacturers operate on paper-thin margins. They don't have the luxury to experiment with new technologies."

Wong added that many Chinese manufacturers don't have a sophisticated IT environment in place, which makes setting up an RFID system more complicated than simply buying interrogators (readers) and tags. "To them, the costs of implementing expensive technology infrastructure far exceed the costs of hiring extra labor," he said.

The argument that RFID can better track goods, as propagated by American retailers, doesn't sell to Chinese manufacturers either. Wong says that RFID tags add to their costs and eat into their profits. "They don't think it is necessary to use RFID if it only tells them that goods have left their warehouse; they already know that much!"

"Manufacturers in China, therefore, wonder why they should have to pay

for source tagging that only benefits someone else; the retailers should pay for RFID tags is what they feel," added Wong.

For that matter, the adoption of RFID in America too has been "very streaky", feels Amit Basu, a consultant, and the chairman of the Charles Wyly Professor of Information Systems program at Cox School of Business, Texas. "While large retailers like Wal-Mart are pushing their suppliers to adopt standards for RFID in package tracking, there are many complicating factors," he said. "These include media issues (for instance, RF transmission through liquids -- as in coke and beer bottles -- is very unreliable), resilience to wear and tear and environmental conditions, security (vulnerability to spoofing, privacy issues) and standardization."

In fact Wal-Mart, which has deployed RFID technology at 500 stores and at five of its 117 distribution centers and is planning to double the number of stores handling RFID by the end of 2006, has found that there are some suppliers in America that are still entrenched in their belief that it's not going to work. Starting January, the retailer is reportedly taking a tougher approach with suppliers who fail to support the use of RFID wireless tagging on shipments.

According to Fusion the main reasons given by American companies for not adopting RFID are "they are not interested and/or do not find RFID useful and, not popular/wait and see market response."

Nevertheless it seems that the Chinese government has realized that logistics modernization is a key driver in improving China's supply chains, which are inefficient. "Thus, the Chinese government is closely watching the adoption of RFID by overseas companies, both to understand potential customer requirements and to learn best practices," said Jihong Sanderson of Haas School of Business at the University of California and director of Berkeley's Management of Technology in

China program, in one of her recent papers on RFID adoption in China.

She adds that the Chinese government is acutely aware that Wal-Mart, with its RFID mandate, imports an estimated \$12 billion to \$20 billion (roughly 10 percent to 15 percent of overall U.S. imports from China) per year directly from China, which is more than China's total exports to Russia or the United Kingdom.

Others say that Chinese leaders also view the setting of RFID standards as critical to its economic strategy. But here too that country faces problems. A new study from ABI Research, the technology market research firm, released this month has said that a diverse RFID market according to technology type is developing unevenly in China, and uncertainty remains around the proposed standards as well.

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