

Will Green Supply Chain be Key Catalyst in RFID Growth?

Several Green Strategies will be Well Supported by RFID, but there Still Questions around Recycling and RFID

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As the RFID market continues trying to “find its groove,” will the technology join the list of such supply chain efforts as logistics collaboration and rail transport that may be enormously helped by the Green Supply Chain phenomenon?

The answer may be yes, as several environmental initiatives in the supply chain can be well-supported by RFID technology. On the other hand, in some applications RFID causes some sustainability problems.

How will Green Supply Chain strategies support RFID adoption? Consider some of the following example:

Reusable Containers: Many closed and open loop supply chains are increasingly looking at reusable containers (totes, pallets, etc.) that can be used for many cycles, rather than just once (corrugate cartons) or have a limited life (wood pallets). However, these reusable containers are in total expensive assets that need to be better controlled. RFID has already been adopted by many companies for such asset-tracking purposes, and often as in the case of British grocer Sainsbury, those tracking infrastructure can then later be used to develop applications for also tracking what is inside those containers.

Vehicle Mile Tracking: Rightly or wrongly, many believe the US will someday consider or implement taxes based on miles driven, beyond just the tax on each gallon of fuel purchased.

Several European countries have already adopted such approaches (although as yet without any real impact on miles driven).

An adaptation of this approach is the use of variable

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taxation, where the cost per miles changes based on time of the day.

This approach could be used at the consumer level, the trucking/freight level, or both.

In either case, it would clearly involve RFID tags on vehicles and readers either along roadways or at exit ramps.

Out-of-Stock Reduction: Although a bit more of a stretch, some companies, including Wal-Mart, are saying that by using RFID to reduce out-of-stocks at the store shelf, some percentage of consumers will not need to drive to another store or a return trip to that retailer.

Employee Sensing: If employees wore RFID badges, smart HVAC and lighting systems could use this data to make adjustments that would reduce energy use.

Some vendors have already released such “smart building technology.” In some cases, it may simply involve wireless sensors in rooms that monitor room temperatures and allow the system to more

Will Green Supply Chain be Key Catalyst in RFID Growth? (Con't)

efficiently heat and cool the building based on the unique conditions in each room.

In other visions, each employee has a badge that is read as they enter and leave rooms and triggers smart management of lights, equipment, and other systems to optimize energy usage.

Reduce Expedited Freight: Increased supply chain visibility based on RFID reads could give companies a better view of when inventory problems might be arising, allowing them to take earlier action that might relieve the need for expediting freight. In general, expedited transport uses more energy and creates more emissions per pound shipped than the slower modes generally used for that freight.

Tracking Reverse Logistics: In addition to tracking reusable containers back to origin, as described above, RFID might also be used to track and ultimately reduce true waste and/or enable companies to better track compliance with a growing list of reverse logistics/end-of-life environmental requirements.

On the Other Hand...

There are also some downsides to RFID and Green Supply Chains, most of which fall in the area of recycling. As the analysts at IDTechEx recently noted:

- Adhesives, computer chips, pieces of metal



from antennae and conductive inks can affect the process of recycling old corrugated containers, paperboard, etc, and manufacture of new board from recycled feedstock.

- When pallets are composted, the metallic pieces from antennae will be shredded, but cannot break down.
- Metals and ceramics are contaminants and can damage the glass kilns, and this will affect glass recyclers as well as glass blowers.
- Metals can contaminate PET and HDPE; and thus affect plastic recyclers and manufacturers.

All told though, SCDigest believes continuing Green strategies will be a boost to RFID adoption over time, and may help push some marginal projects over the top inside companies.