Chemical Industry Explores ROI for RFID

The trade group Chemical Industry Data Exchange has teamed up with EPCglobal to develop an RFID business model and foster RFID standards that benefit chemical manufacturers.

By Beth Bacheldor

Aug. 17, 2007—The Chemical Industry Data Exchange (CIDX)—a trade association made up of more than 80 chemical producers, suppliers, marketplaces and industry consultants—is encouraging members to avail themselves of a business model designed to help chemical companies more quickly establish a return on investment (ROI) from their EPC RFID deployments. In a white paper it recently published, CDIX describes the ROI model and spells out ways in which the association is aligning itself more closely with EPCglobal North America, which developed the ROI model with input from CIDX, and how it hopes to involve itself in the development RFID standards addressing the needs of the chemical industry.

"Even though RFID technology is being used by chemical companies, especially those that provide products and services to Wal-Mart and the [U.S. Department of Defense], its uses, to date, are limited," says Ken Hutcheson, CIDX's standards director. "CIDX is driving an industry-wide initiative to examine the potential of RFID and find business scenarios where it might provide additional value to the industry. CIDX is also representing global chemical companies in organizations such as EPCglobal to ensure that chemical companies' needs are being considered as standards are being developed."

According to Hutcheson, the benefits RFID can provide to chemical companies include reducing accidents and injuries; improving the management, maintenance and repair of assets; enhancing inventory management; and tightening the security of railcars, trucks and logistics.

About a year ago, CIDX published a previous white paper on RFID technology's potential in the chemical industry (see Chemical Industry Studies RFID's Applications). In that paper, the authors—a team of experts representing Dow Chemical and other member companies—recommended that the 20-year-old organization establish a relationship with EPCglobal. Since then, the two groups have signed an affiliate agreement, granting CIDX membership to EPCglobal. Consequently, Hutcheson says, EPCglobal representatives have joined CIDX project teams charged with investigating RFID applications and issues, and CIDX officials have attended EPCglobal meetings and events to stay abreast of its efforts.

Currently, EPCglobal is forming the Chemical Industry Action Group (CIAG), which will serve as a vehicle for EPCglobal membership to develop EPC RFID standards that meet the needs of chemical companies. CIDX plans to participate in the CIAG, and to provide documentation on some CIDX standards (called Chem eStandards) used within the chemical industry to buy, sell and deliver chemical products—essential processes within a supply chain. The standards are comprised of business process guidelines, message specifications, envelope and security specifications, implementation tools and technical white papers.

"CIDX has an opportunity to play a role in the development of standards by the CIAG, by providing existing Chem eStandards to the CIAG for discussion," write the authors of the new white paper, entitled "Chem eStandards Initiative—Radio Frequency ID." The authors include a number of executives from CIDX member

companies, including Dow Corning, Eastman Chemical Co. and DuPont. "The business processes within the Chem eStandards should be analyzed for applicability to EPC RFID by the CIAG and recommendations for changes communicated to CIDX," the authors add. CIDX plans to appoint an individual from one of its member companies to represent CIDX's interests on any EPCglobal industry action group.

CIDX members, EPCglobal members and students at Stanford University and Eindhoven University worked with the CIDX staff to develop the model, which the group named the Chemical Value Model. The document is intended to help determine the value potential of RFID adoption for a given chemical company's operating profile and processes. To use the model, a company defines its business objectives, evaluates plant activities and current costs, and inputs all that data into the model. "This will serve as starting-point assessment to determine where RFID will add business value," the authors write, "and to help plan a scalable deployment approach, starting with a controlled pilot for chosen business processes being targeted." Hutcheson says CIDX will test it out and add more business scenarios specific to chemical companies.

The white paper also discusses other ways EPCglobal standards and CIDX's own Chem eStandards may converge. For example, the paper cites EPCglobal's EPC Information Service (EPCIS), a network infrastructure that serves as a communications mechanism between applications and data repositories so companies can exchange data. According to the CIDX white paper, EPCIS "contains both the specification of the interfaces and the data itself and is a possible overlap with Chem eStandards." Another area where EPCglobal and CIDX may work together, the paper suggests, is the EPC Tag Data Standard, which defines some common container types. "The chemical industry would likely have more [container types] to add [to the EPC Tag Data Standard]," the authors write.

RELATED_ARTICLES With the publication of this second white paper, CIDX has launched a project team to develop an RFID evaluation process for analyzing business scenarios of value to the chemical industry. The team will also review the Chem eStandards with EPCglobal to determine RFID opportunities and potential impact on existing CIDX standards, as well as identify required CIDX documentation to support, among other things, RFID enablement.

CIDX's new white paper, downloadable from the organization's Web site, is free to CIDX members and available to non-members for $1,000. The Chemical Value Model is available from EPCglobal to CIDX members free of charge.