



## RFID for the Business of Waste Management

Typically, recording the trash collection is a manual operation and is the responsibility of the trash collection vehicle driver.

Although the hauler companies may employ GPS systems to capture the time metrics they desire, accurate container tracking is another matter. With manual operations, numbers can be misread, misreported, mistyped or left blank altogether; and unfortunately, barcodes cannot survive the environmental stresses in this application. Furthermore, asking drivers to manually collect this data is a significant distraction to their main responsibility--driving.

To address this risk and solve the manual data collection problem, RFID system technology is an ideal solution

RFID is now being used by municipalities to monitor waste pickup. Waste Disposal trucks equipped with RFID readers pick up bins marked with RFID tags. The readers then record the exact time and place every time a waste bin is emptied. An Omnitrol network edge appliance then receives data from all readers, and its built-in middleware then determines subsequent real-time actions based on business-rules and may integrate with enterprise management software as appropriate. This permits a new degree of monitoring and control of the waste-disposal process. By installing active RFID tags on the trucks, identification is automatic at waste disposal sites and waste weight can be logged into an integrated database that serves the organization. RFID implementation thereby can provide a centralized real-time view of the entire process.



**RFID ensures that confidential documents destined for shredding end up shredded**

Benefits include:

- Cheaper, faster, more accurate data reporting. No manual data-entry is required.
- Billing of customers is more timely and accurate
- Allows municipalities to monitor performance of sub-contractors
- Unprecedented degree of control and traceability in disposing of hazardous or otherwise sensitive waste material

### **RFID secures documents destined for shredding**

Secure destruction of confidential paper records is a top concern for corporations and government agencies alike. Leading waste management companies can now implement a system to track these records from the point of collection to final destruction.



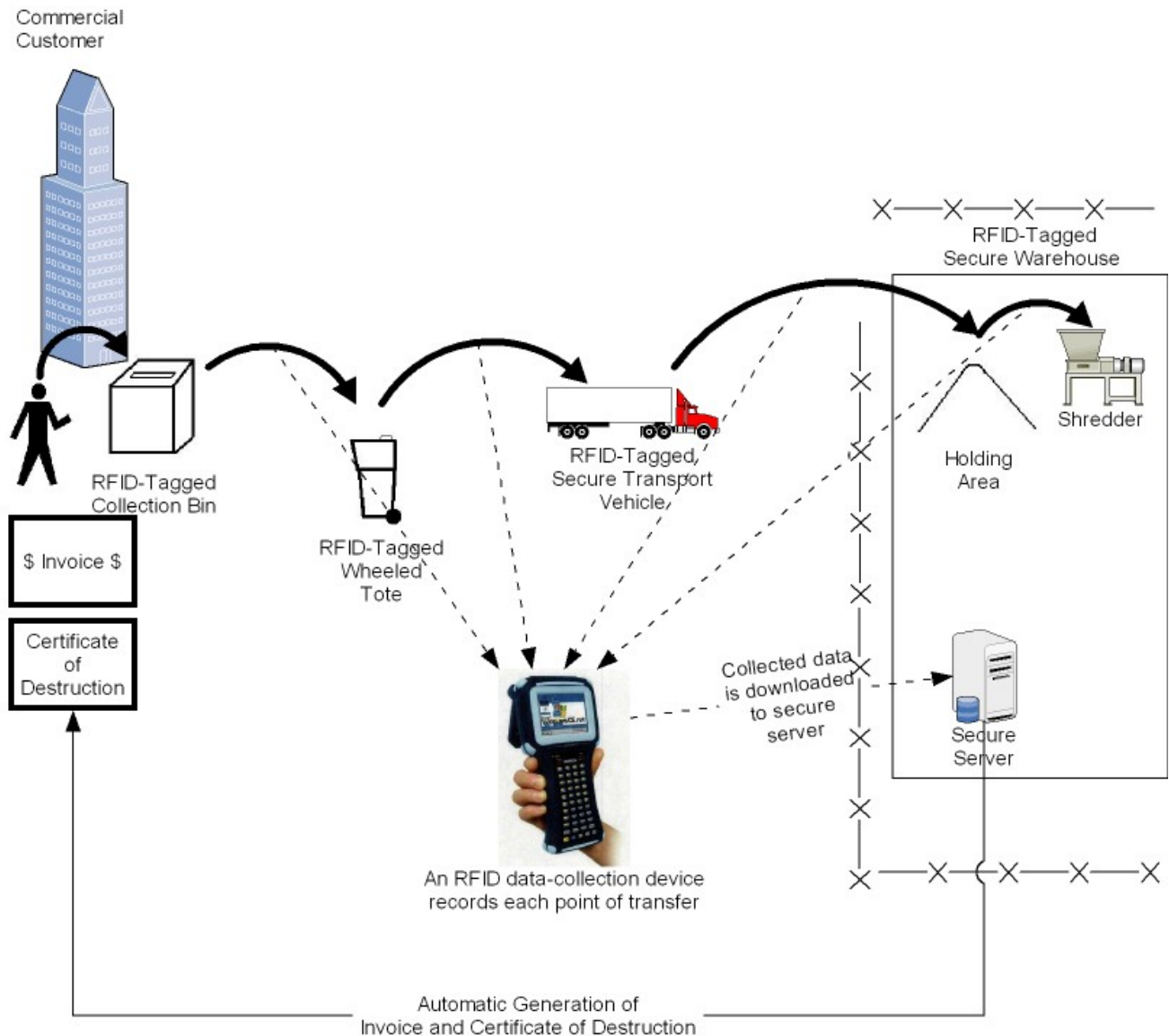
Vehicles such as this one securely transport confidential materials to the point of destruction

### RFID creates accountability for medical, and toxic waste disposal

RFID tagging in tracking medical-waste materials as they're transferred to disposal sites. The primary goal is to prevent illegal waste disposal by creating accountability with a tracing system for hospitals, all sources of toxic and dangerous waste materials and transportation companies

### Automated Data Collection Using RFID

As custodial staff pick-up confidential materials from customer sites, they record each transfer using a hand-held RFID data-



collection device. The materials are transferred from collection bin to wheeled tote, from tote to truck, and, eventually, deposited at the waste management company's Secure Warehouse, where they are promptly destroyed. At the Secure Warehouse facility, data from the RFID data-collection device is securely downloaded to the payment server over an encrypted network. Custom-designed software assembles the data thus collected and issues automated invoices and Certificates of Destruction back to the customer, all with zero administrative effort on the part of company staff. Because the RFID system is completely integrated with the Scheduling and Billing system, information such as pick-up routes and work-orders is automatically downloaded to the RFID data-collection devices completely eliminating any need for duplicate data-entry.

## **Changes to the Traditional Model**

Not only is the business of waste management improving because of RFID, but RFID technologies are serving as a catalyst to change the way customers are billed for waste services. New billing models are emerging and gaining momentum inside of city governments and municipalities as they learn of the multi-layered benefits offered through new waste management models. The Pay-As-You-Throw model is a program that ties recycling to a cost incentive program whereby users are charged according to the amount of waste they produce and thereby encourages recycling and improves the system to a user pay model vs an inequitable equal flat rate.

## **Equipment Used**

The data-collection devices are ultra-rugged ,specially designed for rugged industrial applications, and can withstand multiple drops to concrete and other harsh conditions. They are equipped with an integrated HF RFID reader and antenna, a full alpha-numeric keypad, touch-screen, and a built-in WiFi network card. All of these features were selected for maximum ease-of-use for the operator.

An Active RFID system can also be used to trigger security video recordings and live remote video transmissions. In addition, the tags can be used for automatic personnel and vehicle access to facilities, corporate-asset tracking and protection, as well as special-purpose sensing. Automatic e-mail alerting and paging is offered for rapid response to security incidents.

## FALKEN Secure Networks(FSN)—Your partner for RFID automation

If you choose to pursue RFID implementation in your organization, here is the FALKEN Secure Networks commitment to you:

- FSN will provide solution architects to work with you to define system requirements for your particular installation. Multiple locations can be networked together for a central and real-time view and centralized management.
- FSN will do a RFID site survey to validate radio frequencies, tag types, system design and performance
- FSN will provide all necessary hardware and software to make the system work for you
- FSN will integrate the system with your existing enterprise management software
- FSN will provide documentation for the system, including operating procedures
- FSN will train your people
- FSN will provide warranty and continued system support

For RFID-enabled Document Tracking and Management, FALKEN Secure Networks (FSN) and partners bring together the right technologies to give you control over your files and make your office run more efficiently. Our automated and secure processes save time and labor, and prevent problems before they occur. With FSN ,you get the latest, non-proprietary secure RFID technology with the most powerful and flexible RFID file tracking software available.

## Contact Us

FALKEN Secure Networks is a specialized System Integrator, RFID Solution Architect, and Value-Added Reseller with focused expertise in the RFID site survey, cost-effective design, and turn-key project implementation.

Contact FSN at [sales@falkensecurenetworks.com](mailto:sales@falkensecurenetworks.com)



**Motorola/Symbol**

**PartnerSelect**

Authorized Value-Added Reseller



CERTIFIED Partner

Authorized Value-Added Reseller



Authorized Value-Added Reseller



**Omni-ID™**

Authorized Value-Added Reseller



Authorized Mikoh Partner

**FILETRAIL**

Authorized FileTrail Partner



CERTIFIED Partner

Authorized Value-Added Reseller