# Melbourne City Council Tracks Its Car Fleet

The council estimates that once fully deployed and integrated with its employee ID system, the EPC Gen 2 RFID vehicle-tracking system will reduce labor by at least 40 staff hours per month, resulting in an annual financial savings of up to $40,000.

By Dave Friedlos

Aug. 18, 2008—Melbourne's city council is planning to expand the use of passive ultrahigh-frequency (UHF) RFID system after a successful 12-month trial tracking fleet vehicles from its corporate parking lot. The council now wants to integrate vehicle RFID data with existing staff identification information, which is captured when employees use their RFID cards each time they enter or exit the parking lot. Once the two data sources are linked, the council will have a fully automated asset-management system.

For the past year, the council, responsible for the city's administration, has been testing the technology's ability to track vehicles as they enter and leave the parking lot to provide automated, accurate data regarding the movement of its vehicles. The system will replace the existing process of manually logging the fleet and its movements, which has been both time-consuming and inefficient.

Brian Shanahan, chairman of the council's finance and governance committee, says the decision to adopt radio frequency identification for vehicle management was quite simple. "For a relatively modest outlay of approximately AU$12,000 [US$10,000], the technology offers some obvious efficiencies over the current manual system," he says. "Based on the current fleet of 85 vehicles, we anticipate the RFID system will result in a return on investment within the first couple of months once it is fully integrated and operational.

"We estimate RFID has the potential to improve efficiencies in fleet data collection and data quality by up to 90 percent," he adds, "saving at least 40 staff hours per month—a financial saving of up to AU$40,000 [US$35,000] per year."

Accurate data collection is essential, because different departments within the council are charged separate rates depending on the vehicle used. The collection of vehicle usage data has been very labor-intensive until now, Shanahan says, with daily usage sheets completed by the council staff each time a vehicle was used, and completed daily sheets manually entered into the fleet database to meet legislative and operational requirements.

"The RFID system provides accurate data collection of each vehicle entering and departing the car park," Shanahan says, "enabling the council to do away with manual records for asset-management keeping."

Gamma Solutions, a supplier of data-collection hardware and software, was tasked with replacing the inefficient, time-consuming manual process with one that is automated. The company installed an RFID system, including passive 920 MHz RFID tags that comply with the EPC Gen 2 standard, as well as two portals containing Intermec IF5 fixed RFID readers. A tag is attached to a vehicle's dashboard, and the interrogator reads that tag and transmits its data, using a standard PC via Ethernet, to a database of vehicles logged each day, before bespoke software provides the information in a spreadsheet.

"When drivers stop the car to swipe their access card at the security gate, the tag on the dashboard is read at the same point," says Clem Valdez of Gamma Solutions. "The tag is encoded with the registration of the vehicle, so the council knows exactly when it has left the car park."

A significant amount of testing was conducted to ensure the RFID system would capture the vehicle data accurately, Valdez notes. "We built a portal in our office and tested it to ensure that it would work, given the speed of the car, and that the antenna height was within sufficient proximity to read the tags," he says. "We then installed the portals at entry and exit points at the Burke Street car park, and placed the tags on the dashboard to determine the range and antenna placement required."

The next step, Valdez says, is to integrate vehicle usage data with employee identification information derived from the RFID access cards council employees use to enter and exit buildings and the council parking lot. Ultimately, he indicates, tags within the vehicles could be utilized to open security gates at the parking lot automatically.

"What the council wants is to integrate the collected data, so when a vehicle exits the car park, it is linked to the person inside when they swipe their employee pass," Valdez explains. "There is a lot of back-end IT work to be done to integrate employee records with vehicle usage data. The initial trial has been extended, and we hope to integrate vehicle usage data with staff identification by the end of the year. But the council has not been fazed by the time it has taken, because it wants to get it right."

RELATED_ARTICLES According to Shanahan, the vehicle movement identification program has been operating effectively. When the vehicle data and staff identification data are integrated, however, the council will have a fully automated IT system to replace the existing manual process.

"Our staff are currently investigating the best options to successfully integrate the vehicle RFID data to the council's IT systems," he says. "We will then carry out a comprehensive pilot program, before phasing out the manual system and fully introducing the new one. Our corporate fleet vehicles are important council assets, and it is our responsibility to ensure the system is spot-on before we go live."