case study

Fill 'er Up: Fleet Automation Fuels Real-Time Productivity and More at Earhart Petroleum, Thanks to New Software and the CV30 Vehicle Mount Computer From Intermec by Honeywell

Since 1952, Earhart Petroleum has been "fueling" Ohio – delivering fuel, propane products and services to residential customers and businesses throughout the Buckeye State. Over time, the company has grown to become one of Ohio's most reliable and respected energy suppliers and has even expanded to provide wholesale fuels to Kentucky, Indiana, and southern Michigan. Its commitment to customer service and maintaining competitive prices is unmatched in the industry.

However, in the company's ongoing efforts to evolve operations and improve the customer experience, Earhart Petroleum's President Mike Earhart said they identified a need to implement an automated fleet-based system that would provide better real-time information and help track performance.

"We found we were lacking basic management control over our inventory, fleet expenses and the ability to set performance indicators," said Earhart.

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"We saw a real need to invest in an advanced technology solution that would offer better visibility into our overall fleet operations." The answer? A customized software solution created by The SMS Group, an expert integrator of data collection systems, coupled with Intermec® by Honeywell CV30 vehicle mount computers and CK3 rugged handheld computers.

The Need for Automation

Earhart Petroleum hoped to achieve several goals with their technology investment:

- Improve delivery efficiency (as measured by gallons delivered per truck/per day) by 20 percent
- Minimize inventory shrinkage
- Reduce staff overtime
- Improve invoice turnaround time by three business days

Under Earhart Petroleum's old system, they printed orders at the company's regional offices, where drivers would meet each morning to arrange their routes for the day. But this system didn't optimize routes. Instead, it required drivers to create their own routes.

Same-day orders also caused major issues. Office staff communicated order information to drivers by phone – often losing key details in the process. As a result, simple driver errors, like missing a delivery window, increased. Additionally, office staff lacked a real-time product inventory for each truck. This led to routing delivery trucks with insufficient inventory to fulfill same-day orders. They delivered fewer products and at an increased cost.

Finally, all completed order tickets were sent by mail or courier back to the main office for invoicing. A delay of two to three days followed before office staff could generate an invoice for the customer.

The absence of real-time feedback regarding what products were on each truck also prevented quick analysis of inventory variances. By the end of each month, it was difficult to identify the cause of an inventory variance. As a result, inventory shrinkage became a significant expense issue.

A Customized Solution

"For an overall solution, our needs exceeded anything a pre-packaged solution could provide," said Earhart. "We worked with The SMS Group to bridge the gap from packaged software to something tailored to our needs."

The SMS Group created a customized software solution that offered Earhart Petroleum the ability to utilize the trucks as Wi-Fi hot spots. Additionally, the software is enabled to transmit data via WLAN, Wi-Fi, or batch store data if a network is unavailable.

To complete the solution, Earhart Petroleum tested several hardware options. They chose the Intermec by Honeywell CV30s due to the product's ultra-rugged form factor – a key requirement for withstanding the harsh "in-cab" environment.

Under the new system, Earhart Petroleum equips delivery and service vehicles with the Intermec by Honeywell CV30, proving a platform to run multiple in-cab applications. These include the company's custom order fulfillment application, DOT hours of service application, and time and attendance payroll application.

These units continually receive route-optimized open orders from logistics personnel and send back multiple levels of data, including:

- Completed delivery information
- A log of payroll hours
- Location of the vehicle
- Arrivals and departures from delivery location
- Driver safety metrics
- Engine performance data

Additionally, the on-board systems transmit information in real-time to a logistics group made up of dispatchers and analysts at the company's main office. This allows dispatchers to make better tactical decisions on a daily basis. At the same time, data received back from the fleet is now aggregated and refined so analysts can make better strategic decisions, such as identifying where to locate delivery and service trucks for peak seasons, identifying optimal inventory storage/reloading locations, and even targeting which customers require tank monitoring to ensure service expectations are met and they don't run out of fuel.

"To meet our customers' expectations, we've set high delivery and service standards for our company," said Earhart. "This is documented, framed, and hanging throughout our office as a daily reminder. Under our new system, we've equipped our logistics group well with tools that give them the best chance of success to consistently meet these standards."

Keys to Success

Earhart reported the company has already met or exceeded most of their initial goals set in 2004, but still has much progress to make against updated targets.

"Since implementation, productivity of our small and large truck fleets has improved by more than 20 percent. Data sent back from each truck has also helped to nearly eliminate all risk behaviors like speeding and hard- braking, and driving violations are at a 5-year minimum. Additionally, turnaround times for invoicing have improved 2-3 business days for our small truck fleets," said Earhart. "With this technology, we have also become a more scalable organization in that we can move to service more customers in a larger geography very quickly."

Fueling the Future

Currently, Earhart is also installing Intermec by Honeywell CK3 handheld mobile computers on a portion of their fleet. The CK3s enhance Earhart Petroleum's services by enabling them to better track the fuel consumption of customer fleets, and to improve inventory control in its cylinder operations.

"We are already looking forward to the future capabilities of this solution," said Earhart. "We continue to gather more data from our trucks and drivers in order to better serve our customers through leaner operations, and quicker responses to our customers' needs."

Earhart added that he's also pleased the technology solution has done nothing but boost the company's fine customer service. It's a tradition they've been known for since the 1950s.

"Automating our fleet has ultimately allowed us to better serve our customers, which, at the end of the day, is the foundation of our business," said Earhart.

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